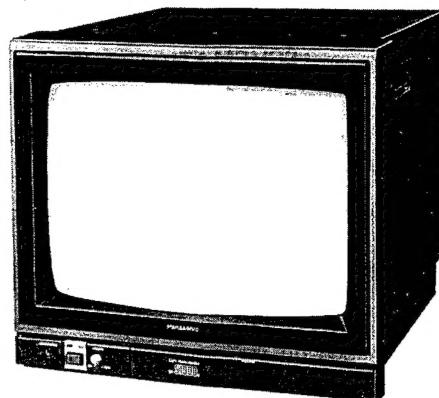


Service Manual

Color Video Monitor BT-S1900N GX-V1 chassis



The service technician is required to read and follow the "Safety Precautions" and "Important Safety Notice" in this service manual.

Specifications

Power Source:	120 volts, 60 Hz AC	Picture Tube:	510ZTB22, 185 square inches 19 inches measured diagonal 90° deflection (Compu Focus Picture Tube with Wider Electron Lens)
Power Consumption:	94 W average	Quality Engineering Feature:	Blue Only Switch Horizontal Delay Switch Vertical Delay Switch Underscan Switch Comb /Trap Switch Chroma Switch Sync Switch Horizontal Center Control Vertical Center Control
Video Input (Bridging):	1 Vp-p \pm 6 dB, High Impedance or 75 Ω switchable, BNC-Type Bridging and 8-Pin Connectors		
Audio Input (Bridging):	RCA Type and 8-Pin Connectors		
Video/Audio Output:	BNC Type Video and RCA Type Audio Connectors		
Semiconductors:	Transistors 58 Diodes 63 Posistor 1 Integrated Circuits 9		
Anode Voltage:	30.5 kV max. (Zero Beam Current) 29.0 kV \pm 1.5 kV	Dimensions:	Height: 17-7/16 inches (444 mm) Width: 18-15/16 inches (482 mm) Depth: 19-11/16 inches (500 mm)
Speaker Output (Internal Speaker):	1.5 watts (10% Distortion) (Elliptic Type, Dynamic Voice Coil 8 Ω)	Weight:	58-5/16 lbs. (26.5 kg)
Automatic Control Circuits:	Hor. Sync.Saw Tooth AFC Color Sync.APC Type Automatic Noise Canceller IC AVR Automatic Degaussing Automatic Beam Limiter	Specifications are subject to change without notice. Weight and dimensions shown are approximate.	

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THIS MODEL COMPLIES WITH DHHS RULES 21 CFR SUBCHAPTER J APPLICABLE AT DATE OF MANUFACTURE.

IMPORTANT SAFETY NOTICE

There are special components used in Panasonic Monitor sets which are important for safety. These parts are shaded on the schematic diagram and on the replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-RADIATION, shock, fire, or other hazards. Do not modify the original design without permission of Matsushita Electric.

ABBREVIATIONS USED IN THIS MANUAL

ABL Automatic Beam Limiter
ACC Automatic Color Control
APF Active Power Filter
APC Automatic Phase Control
CRT Cathode Ray Tube
DY Deflection Yoke

FBT Flyback Transformer
OTL Output Transformerless
SEPP Single-Ended Push-Pull Circuit
VTVM Vacuum Tube Volt Meter
ATT Attenuator

SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. It is advisable to insert an isolation transformer in the AC supply before servicing a hot chassis.
2. When servicing, observe the original lead dress, especially the lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
3. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers, shields, and isolation R-C combinations, are properly installed.
4. Before turning the receiver on, measure the resistance between B+ line and chassis ground. Connect \ominus side of an ohmmeter to the B+ lines, and \oplus side to chassis ground. Each line should have more resistance than specified, as follows.

B+ Line	Minimum Resistance
185V	10k Ω
123V	15k Ω
24V	200 Ω

5. When the TV set is not used for a long period of time, unplug the power cord from the AC outlet.
6. Potentials, as high as 30.5kV are present when this monitor is in operation. Operation of the monitor without the rear cover involves the danger of a shock hazard from the monitor power supply. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture tube to the receiver chassis before handling the tube.
7. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Turn on the receiver's power switch.
3. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 240 k Ω and 5.2M Ω .

When the exposed metal does not have a return path to the chassis, the reading must be ∞ .

LEAKAGE CURRENT HOT CHECK (See figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5 k Ω , 10 watts resistor, in parallel with a 0.15 μ F capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

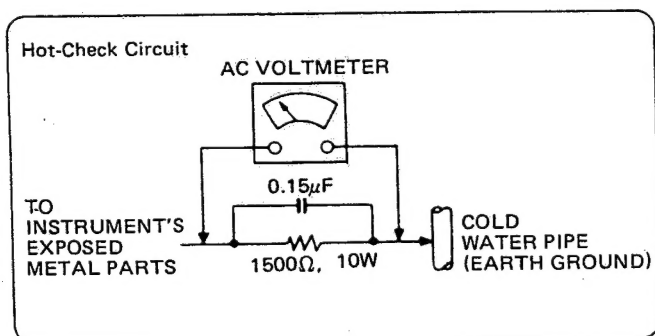


Figure 1

X-RADIATION

WARNING: 1. The potential source of X-Radiation in TV sets is the High Voltage section and the picture tube.

2. When using a picture tube test jig for service, ensure that jig is capable of handling 29.7 kV without causing X-Radiation.

NOTE: It is important to use an accurate periodically calibrated high voltage meter.

1. Turn the Brightness control fully counterclockwise.
2. Set the SERVICE switch to SERVICE.
3. Measure the High Voltage. The meter (electrostatic type) reading should indicate 29.0 kV \pm 1.5 kV. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
4. To prevent an X-Radiation possibility, it is essential to use the specified picture tube.

HORIZONTAL OSC. DISABLE CIRCUIT TEST

This test must be made as a final check before the set is returned to the customer.

1. With the rear cover removed, supply a nominal 120V AC to the set, turn on the power switch.
2. Set the customer controls to normal operating positions.
3. Short R806 with a jumper wire.

Confirm that the picture falls out of horizontal sync.

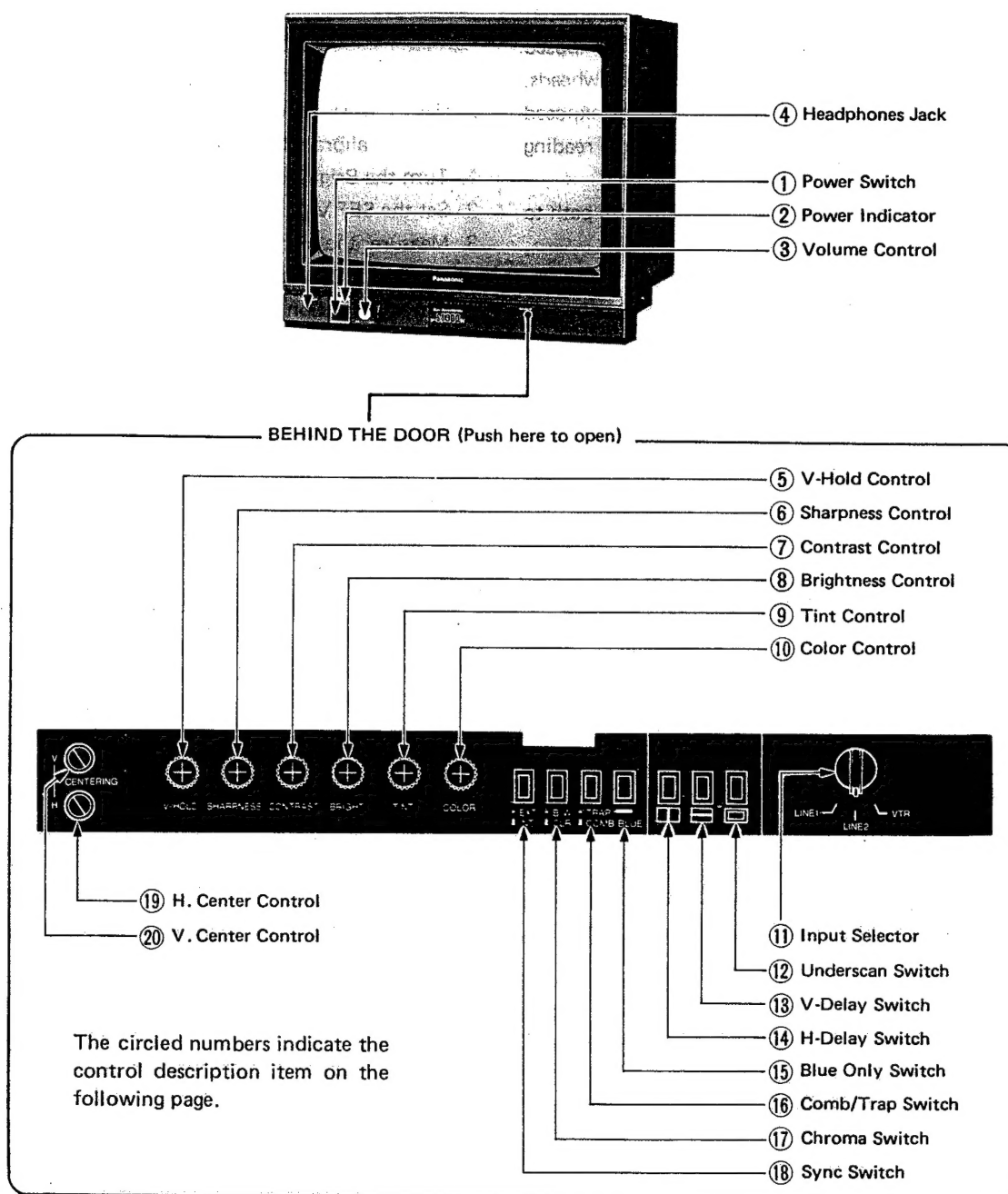
4. If this does not occur, the Horizontal Osc. Disable Circuit is not operating. Follow the Horizontal Oscillator Disable Circuit Repair Procedures before the set is returned to customer.

REPAIR PROCEDURES OF HORIZONTAL OSCILLATOR DISABLE CIRCUIT

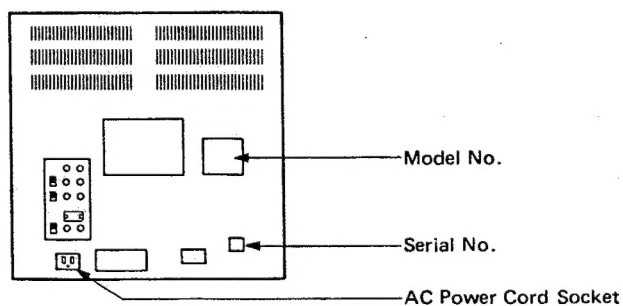
1. Connect a DC voltmeter between capacitor C510 \oplus on the main circuit board and chassis ground. If nearly +25V is not present on that point, find the cause. Check R511, R513, R514, C510, D504, D510 and Q503.
2. Connect a DC voltmeter between the base of Q503 on the main board and chassis ground. If nearly +6.7V is not present on that point, find the cause. Check R521, R522 and D510. If nearly +6.7V is present on that point, find the cause. Check R523, R506, R520, R507, Q502 and Q503.
3. Carefully check above specified parts and related circuits and parts. When the circuits is repaired, horizontal Oscillator Disable Circuit Test must be made again.

BASIC OPERATING INSTRUCTIONS

Control Locations [Front View]



[Rear View]



Controls and Their Functions

① Power Switch

Push to turn the monitor on (depressed position).

② Power Indicator

The Power Indicator will light.

Push again to turn the monitor off.

③ Volume Control

1. Push the end of the control to release the knob.
2. Adjust this control for the appropriate audio level.
If the audio section is not used, turn to minimum.
3. Push again to conceal the knob.

④ 4. Headphones Jack

Audio may be monitored from the front of the unit via headphones using this jack.

(see also the external speaker jack on the rear panel).

⑤ V-Hold Control

Adjust the V-Hold control if the picture rolls up or down.

⑥ Sharpness Control

Turn clockwise to get a crisper picture and turn counterclockwise to get a softer picture.

⑦ Contrast Control

Adjust the contrast level for proper overall contrast.

⑧ Brightness Control

Adjust brightness level for proper overall picture brightness. There is a center detent position.

⑨ Tint Control

Adjust the Tint control for proper chroma phase or flesh tone.

⑩ Color Control

Adjust the Color control to set the chroma (saturation) level.

⑪ Input Selector

LINE 1: Receives video and audio signal from the LINE 1 terminal.

LINE 2: Receives video and audio signal from the LINE 2 terminal.

VTR: Receives video and audio signal from the VTR terminal.

⑫ Underscan Switch

Push the Underscan switch to decrease the overall picture size, allowing the corners to be seen.

Push again to return to normal (over) scan.

⑬ V-Delay Switch

Push the V-Delay switch to allow vertical sync to be seen in the picture.

Push again for normal display.

⑭ H-Delay Switch

Push the H-Delay switch to allow horizontal sync to be seen in the picture display.

Push both H and V-Delay for pulse cross display.

⑮ Blue Only Switch

Push the Blue only switch to defeat the red and green signals. This feature is used for monitor balancing with the SMPTE color bar signal.

Push again for normal display.

⑯ Comb /Trap Switch

Push the Comb /Trap switch for Trap filter function. Push again for comb filter function.

⑰ Chroma Switch

Push the Chroma switch to defeat the color signals. Push again for normal display.

⑱ Sync Switch

Set the Sync switch to "EXT (—)" position when connecting an external composite sync signal to the monitor.

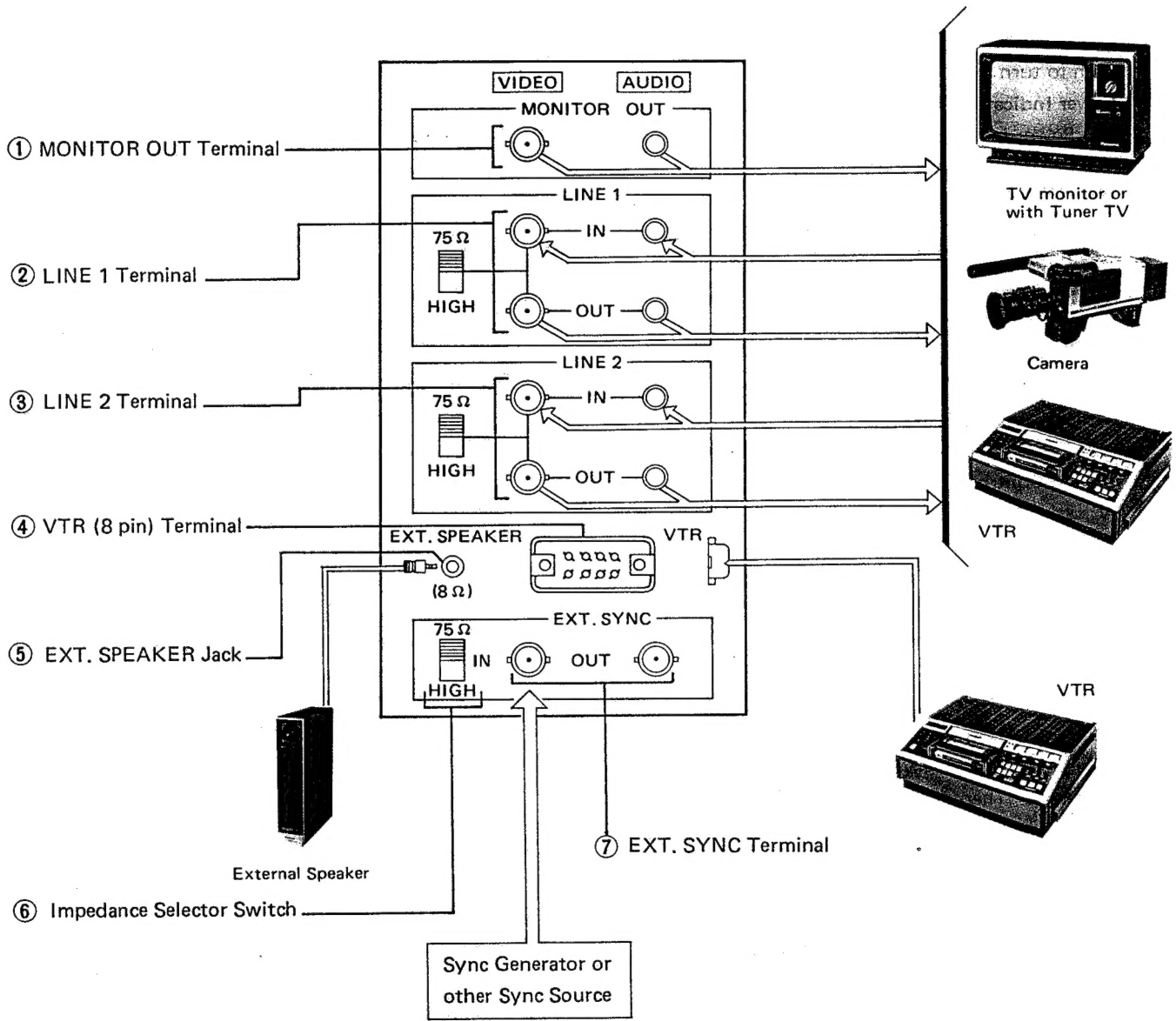
⑲ H. Center Control

Adjust the H. Center position for underscan picture or overscan picture.

⑳ V. Center Control

Adjust the V. Center position for underscan picture or overscan picture.

Connections of Video/Audio Terminals and Their Operations.



① MONITOR OUT Terminal

Input signal can be monitored. (Selected by input selector switch.)

② LINE 1 Terminal/ ③ LINE 2 Terminal

Receives video and audio signal from outside source. And through out the input signal.

④ VTR (8 pin) Terminal

Receives and feeds video and audio signal from VTR.

⑤ EXT. SPEAKER Jack

Inserting the speaker plug into the jack will defeat the build-in speaker.

⑥ Impedance Selector

When bridging or looping through the video signal (or the external sync signal), set this switch at HIGH position, and for other cases this switch should be set at 75 Ω position.

⑦ EXT. SYNC Terminal

INWhen a non-composite video signal is connected to the monitor, it will be necessary to connect an external composite sync signal to the monitor.

OUTThrough out the sync signal.

DISASSEMBLY INSTRUCTIONS

REAR COVER REMOVAL

1. Remove 16 (A) screws shown in figure 2.
2. Pull the rear cover towards you.

CABINET REMOVAL

1. Remove 4 (B) screws on each side and 3 (C) screws, and then carefully the cabinet upward shown in figure 3.

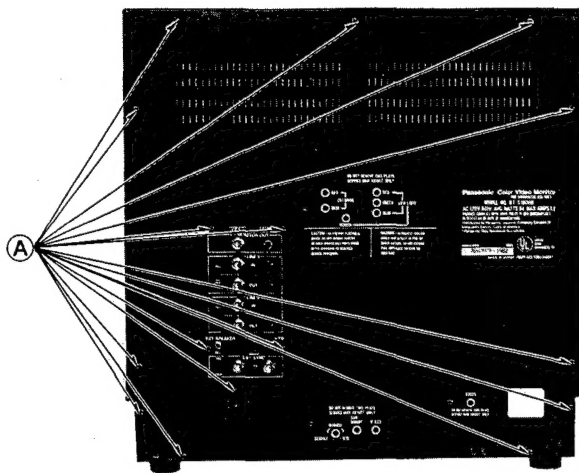


Figure 2

CHASSIS REMOVAL

1. Pull the chassis securing the chassis rail while pushing the 2 pawls (D) shown in figure 4.

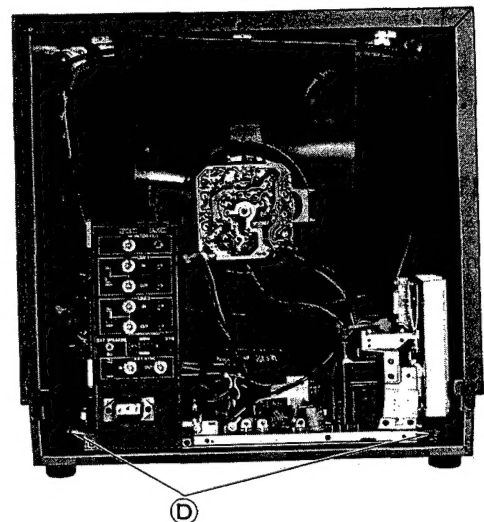


Figure 4

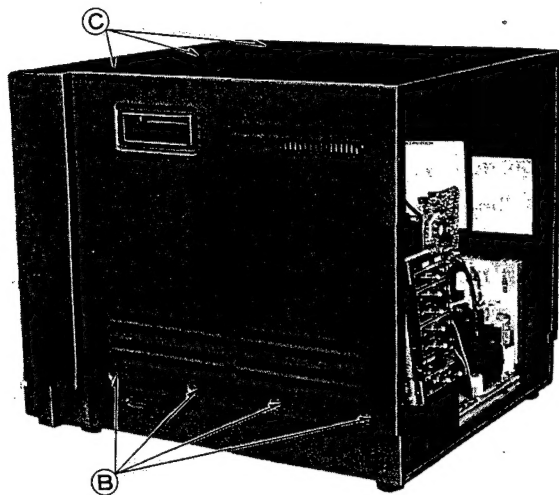


Figure 3

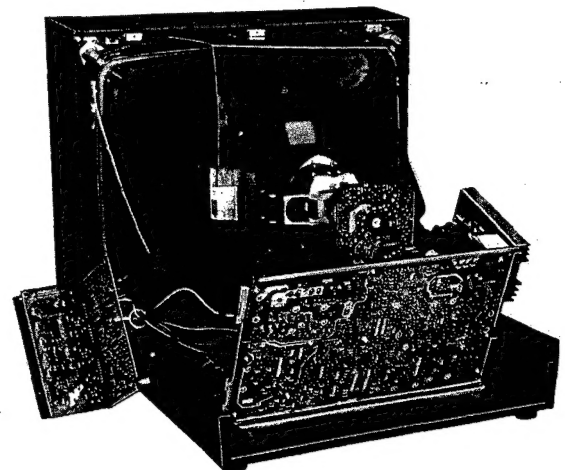
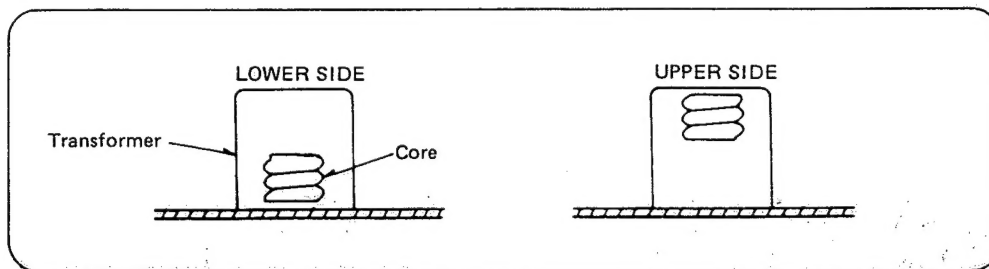


Figure 5

FIELD ALIGNMENT

Note: (Application for both Field Alignment and General Alignment)

1. Use Video pattern Generator for following alignments. (Video input should read 1.0Vp-p.)
2. During alignment, use a non-metallic screwdriver to prevent an unexpected short circuit.
3. The transformer core which has two tuning peak points, should be adjusted at the lower position as below:



A. WITHOUT TEST EQUIPMENT

Alignment can be accomplished by general procedures. The following describes simple alignment methods that do not require extensive service shop test equipment.

VERTICAL-HOLD ADJUSTMENT

Adjust the V-Hold control (R415) and set it at a point where vertical movement is stopped.

VERTICAL-SIZE ADJUSTMENT

Adjust the V-Size control (R413) until picture becomes symmetrical from top to bottom.

HORIZONTAL-HOLD ADJUSTMENT

Adjust the H-Hold control (R507) and set it at a point where horizontal movement is stopped.

SUB CONTRAST ADJUSTMENT

Adjust the Sub Contrast control (R302) to the most desirable position.

FOCUS ADJUSTMENT

Adjust the Focus control to obtain a sharpest and clearest picture.

COLOR PURITY ADJUSTMENT

(See figures 6 and 8.)

1. Operate the receiver for 60 minutes, with the Brightness control at maximum to warm up the CRT.
2. Degauss the receiver fully by using an external degaussing coil.
3. Perform coarse convergence adjustment. (See page 9)
4. Apply a black and white video pattern.

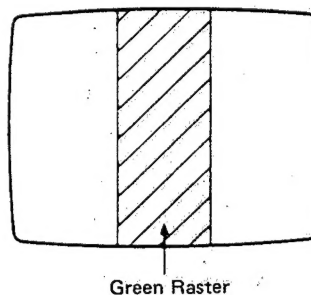


Figure 6

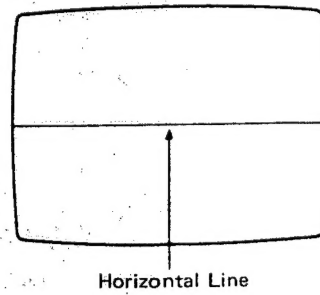
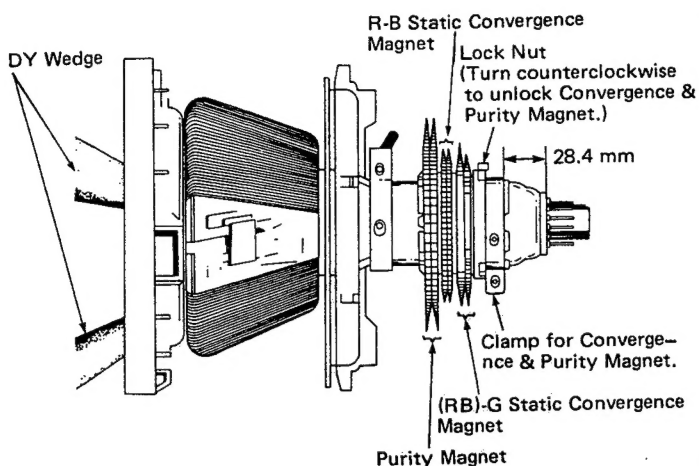
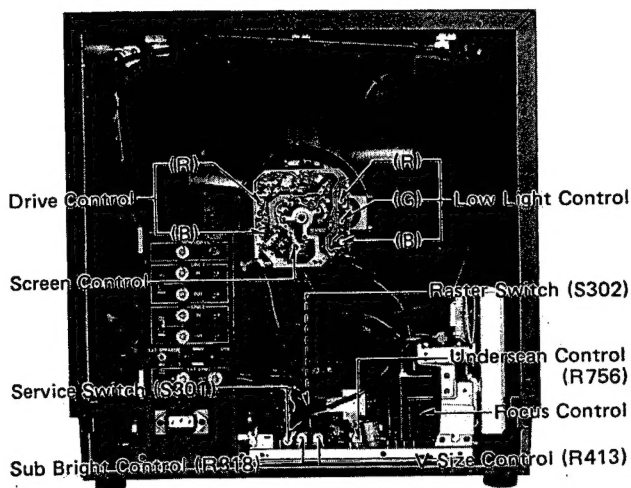


Figure 7

5. Turn the Red and Blue Low Light control fully counterclockwise to obtain a Green field. Adjust the R. and B. Drive controls if the Green field cannot be obtained.
6. Loosen the deflection yoke clamp screw and move the deflection yoke as close to the purity magnet as possible.
7. Loosen the purity magnet clamp (See figure 8) and adjust the purity magnet to set the vertical green raster precisely in the center of the screen. (See figure 6) Tighten the clamp.
8. Slowly move the deflection yoke forward and adjust for best overall green screen.
9. Tighten the deflection yoke clamp screw.
10. Produce a Blue and Red raster with the Low Light controls and observe the good purity is obtained on the respective field.
11. Observe that a uniform white raster is obtained by adjusting the R.G.B. Low Light controls. If the screen is not uniformly white, repeat the above procedure.


Figure 8

Figure 9

COLOR TEMPERATURE ADJUSTMENT

(See figures 7 and 8.)

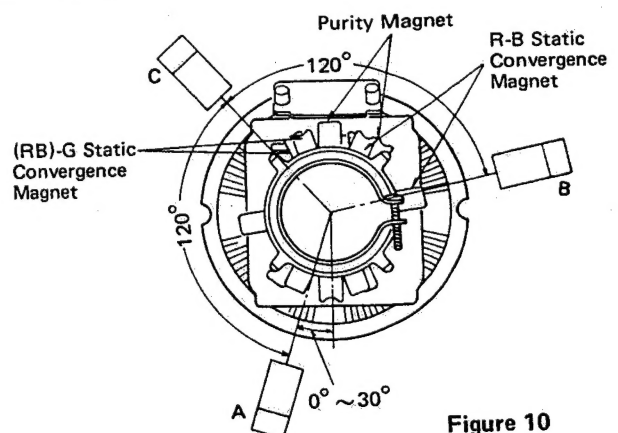
1. Use a black and white video pattern.
2. Turn Color control fully counterclockwise.
3. Place the service switch to SERVICE position.
4. Turn the three Low Light controls (R, G, B, on CRT board) 45° clockwise from the full counterclockwise position.
5. Slowly turn the Screen control clockwise from the full counterclockwise position until two colors out of three R, G, B appear horizontally on the picture tube.
6. Extinguish the two horizontal colors on the picture tube by turning the two respective Low Light controls fully counterclockwise.
7. Turn the Screen control further clockwise until the third color appears as a faint horizontal line on the picture tube.
8. Make the horizontal line white by turning the two Low Light controls which were previously set fully counterclockwise at step (6).
9. Return the service switch to NORMAL position.

10. Alternately adjust the red and blue drive controls to produce a normal black and white picture. Check the black and white picture detail for proper black and white rendition (No coloration) from lowlights to highlights and at all brightness levels for proper tracking. Proper tracking at all brightness levels can be obtained when the screen controls, low light controls, and drive controls are properly adjusted. If the results are unsatisfactory, repeat all the above steps.

CONVERGENCE ADJUSTMENT

Note: Before any convergence adjustments are made vertical size and focus adjustment must be completed.

1. Use a dot pattern to complete this adjustment.
2. The brightness level should be no higher than necessary to obtain a clear pattern.
3. Loosen the convergence magnet clamp and align the red and blue dots at the center of the screen, by rotating the R-B Static Convergence Magnet. (See figures 8 and 10.)
4. Align the convergence red/blue dots with the green dots in the center of the screen, by rotating the (RB)-G Static Convergence Magnet. (See figures 8 and 10.)
5. Tighten the convergence magnet clamp.
6. Remove the DY wedges (See figure 10) and slightly tilt (do not rotate) the deflection yoke horizontally and vertically to obtain good overall convergence.
7. Secure the deflection yoke by reinserting the wedges. (See figure 10.)
8. If purity error is found, repeat the purity adjustments.


Figure 10

NOTE:

1. Wedge A shown in figure 10 should be fixed within a range of 0° ~ 30° to the left of the vertical line as shown.
2. After inserting wedge A, insert wedges B and C. The wedges should be set 120° apart from each other.
3. Be certain that the three wedges are firmly fixed and the Deflection Yoke is tightly clamped in place. Otherwise the Deflection Yoke may shift its position and cause a loss of convergence and purity.

B. WITH TEST EQUIPMENT

When measuring voltage with a VTVM, be sure to use the test points located on the conductor side of the circuit board.

MAIN PARTS LOCATION CHART

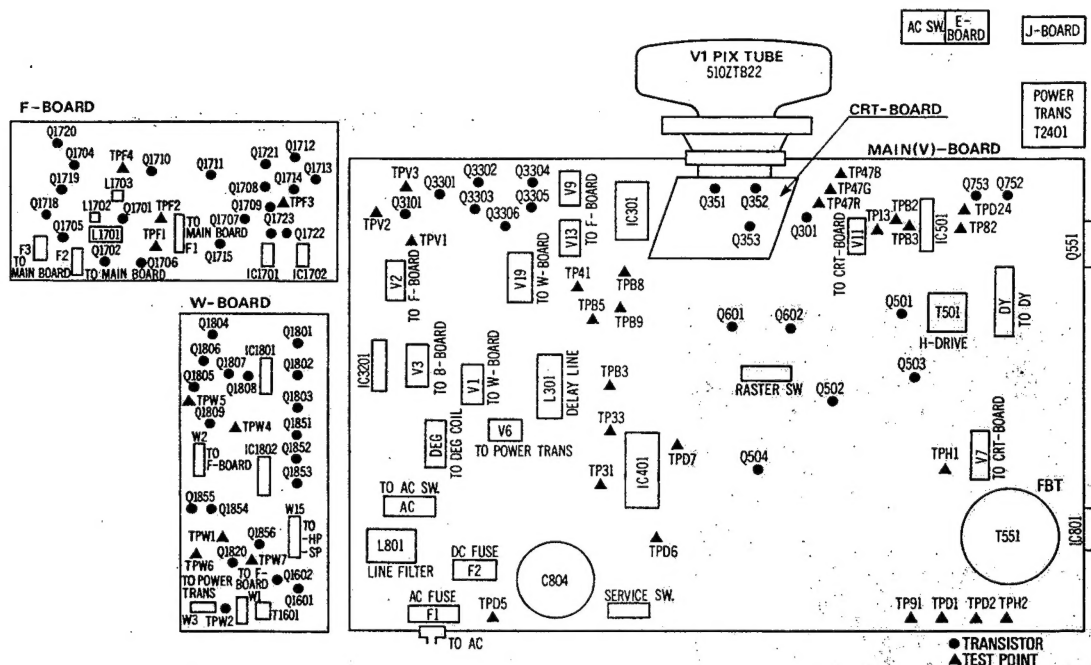


Figure 11

B+ VOLTAGE CONFIRMATION

1. Connect R jumper (10k Ω) between TPB3 and TPB8.
2. Connect electronic voltmeter at each test points as follows.
3. Confirm the indicated test points for the specified voltages.

Test Points	Voltages
B1 (pin ② of connector V7)	180V \pm 10V
B2 (TP91)	123V \pm 1.2V
B3 (TPD24)	24.5V \pm 1.0V
B4 (TPB8)	12.2V \pm 0.8V

HIGH VOLTAGE CONFIRMATION

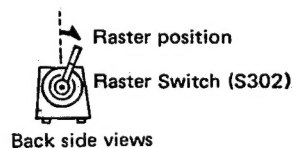
1. Adjust color temperature (See page 9).
2. Connect a R jumper (10k Ω) between TPB3 and TPB8 to blank the raster "zero beam current".
3. Using a calibrated high voltage meter confirm that High Voltage is within a range of +29.0 kV within a tolerance of ± 1.5 kV.

NOTE: Be certain that B+ is +123V within a tolerance of ± 1.2 V with beam current at zero during the High Voltage adjustment.

AUTOMATIC BEAM LIMITER (ABL) ADJUSTMENT

This is factory aligned and no adjustment is usually required, but when the Main-Board, CRT-Board, or the CRT is replaced, the following adjustment is necessary:

1. Set the monitor set to no-input state.
2. Connect a VTVM between TPD1 and TPD2.
(Note: The \oplus terminal of VTVM must be connected to TPD1.)
3. Set Contrast control (R311) to maximum, set Brightness (R312) and Sharpness (R313) controls to click stop position.
4. Set Raster switch (S302) to raster position.



5. Adjust Sub Bright control (R318) to obtain about 17.8V.

GENERAL ALIGNMENT

SUB CONTRAST ALIGNMENT

1. Connect oscilloscope to TP13.
2. Set Contrast control (R311) to maximum position.
3. Set Sharpness control (R310) to click stop position.
4. Receive a black and white signal.
5. Adjust Sub contrast control (R302) for $3.1V_{B-W}$ on oscilloscope shown in figure 12.
6. Set Sub bright control (R318) to center position.

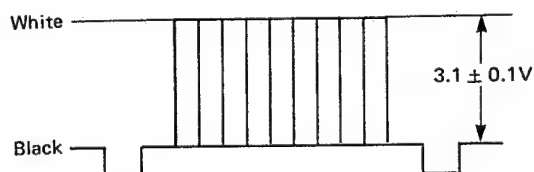


Figure 12

3.58 MHz TRAP ALIGNMENT

Preparation

1. Connect oscilloscope to TPF4.
2. Set Chroma switch (S1707) to "CLR" position.
3. Set Comb/Trap select switch (S1706) to "TRAP" position.

Alignment Procedure

1. Use a studio color bar.
2. Set R1711 to emphasize 3.58 MHz sub carrier.
3. Adjust L1703 to set 3.58 MHz sub carrier at the minimum amplitude shown in figure 13.
4. Confirm that 3.58 MHz sub carrier portion of the cyan is less than 300mVp-p shown in figure 13.

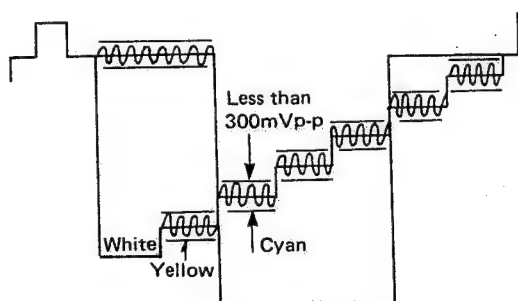


Figure 13

COMB FILTER ALIGNMENT

Preparation

1. Connect oscilloscope to TPF4.
2. Set Chroma switch (S1707) to "CLR" position.
3. Set Comb/Trap select switch (S1706) to "TRAP" position.

Alignment Procedure

1. Use a studio color.
2. Adjust R1711 to set 3.58 MHz sub carrier at the minimum amplitude.
3. Adjust L1702 to set 3.58 MHz sub carrier at the minimum amplitude shown in figure 14.
4. Repeat steps 2 and 3.
5. Confirm that 3.58 MHz sub carrier portion of the cyan is less than 200mVp-p shown in figure 14.

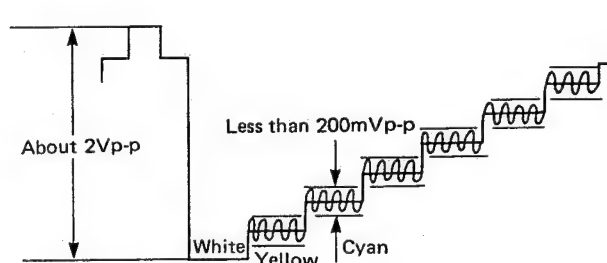


Figure 14

APC ALIGNMENT

Preparation

1. Connect electronic voltmeter between TPB2 and chassis ground.
2. Set Contrast control (R311) to maximum position.
3. Set Color (R602) and Tint (R603) controls to center position.

Alignment Procedure

1. Use a studio color bar signal.
2. Turn CW ADJ. control (R615) to keep color synchronization.
3. Read indication on an electronic voltmeter down to the second digit below the decimal point. (Pay attention to the polarity.)
4. Adjust CW ADJ. control to attain the values specified in the item 3 within a tolerance $\pm 0.05V$ using the electronic voltmeter.
5. Change signal and confirm that color synchronization is stable.

COLOR PHASE ALIGNMENT

Preparation

- 1. Connect oscilloscope to TP47R.
- Note: When using a probe with low input capacity (10 to 1), connect oscilloscope through resistor (10kΩ) to TP47R.
- 2. Set Color (R602) and Tint (R603) controls to center position.
- 3. Set Contrast control (R318) to maximum position.

Alignment Procedure

- 1. Use a rainbow color bar signal.
- 2. Confirm that waveform on the oscilloscope is as in figure 15.
- 3. Turn Tint control (R603) and confirm that variable range is more than $\pm 30^\circ$.

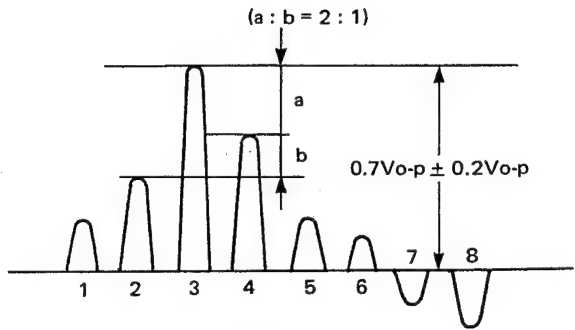


Figure 15

CIRCUIT EXPLANATION

HORIZONTAL OSCILLATOR DISABLE CIRCUIT

The positive DC voltage, which is supplied from the cathode of D504 for monitoring the high voltage, is applied to the emitter of Q503, through R514 and R513. The voltage at the base of Q503 is regulated by Zener Diode D510. Under normal conditions, the voltage applied across the base and emitter of Q503 is not sufficient to cause base current to flow and holds the transistor cut off. If the high voltage increases over the specified voltage, the positive DC voltage which is supplied from the cathode of D504 also increases.

The increased voltage applied to the emitter of Q503 causes base current to flow through Zener Diodes D510. Consequently collector current begins to flow and the voltage at the collector, which is connected to the base of Q502 increases. This allows potential of Q502 collector to decrease simultaneously causes the horizontal oscillator frequency to increases, loss of horizontal sync, and a lowering of the high voltage. R524 affects slightly to aid operation of horizontal oscillator disable circuit when the beam current increases and potential on the TPD2 decreases.

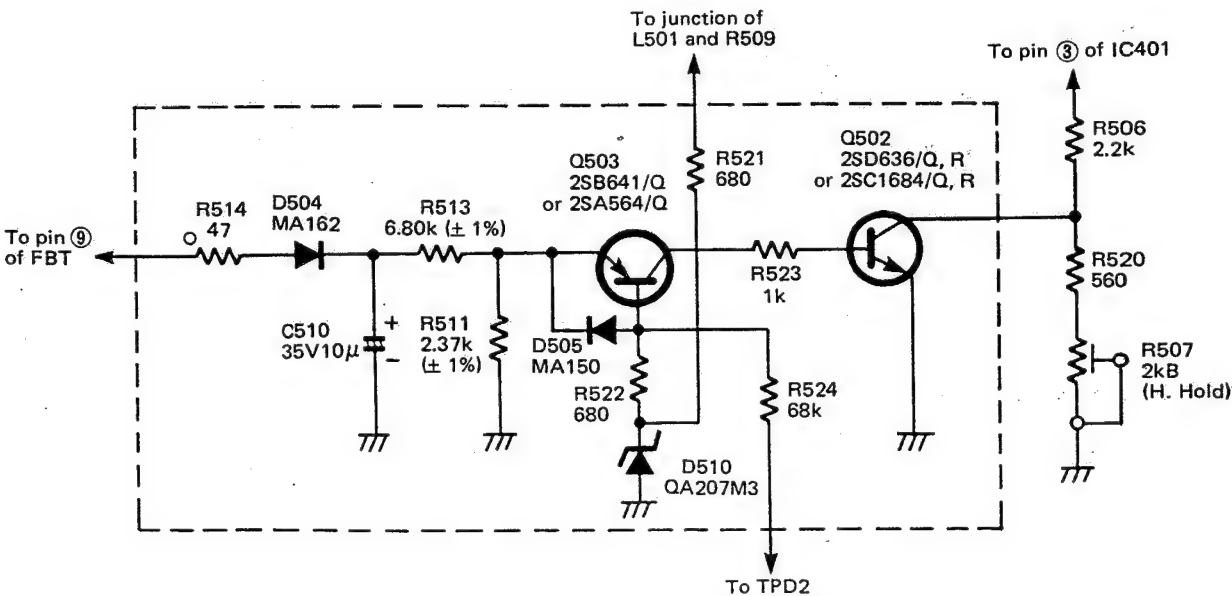


Figure 16

MEMO

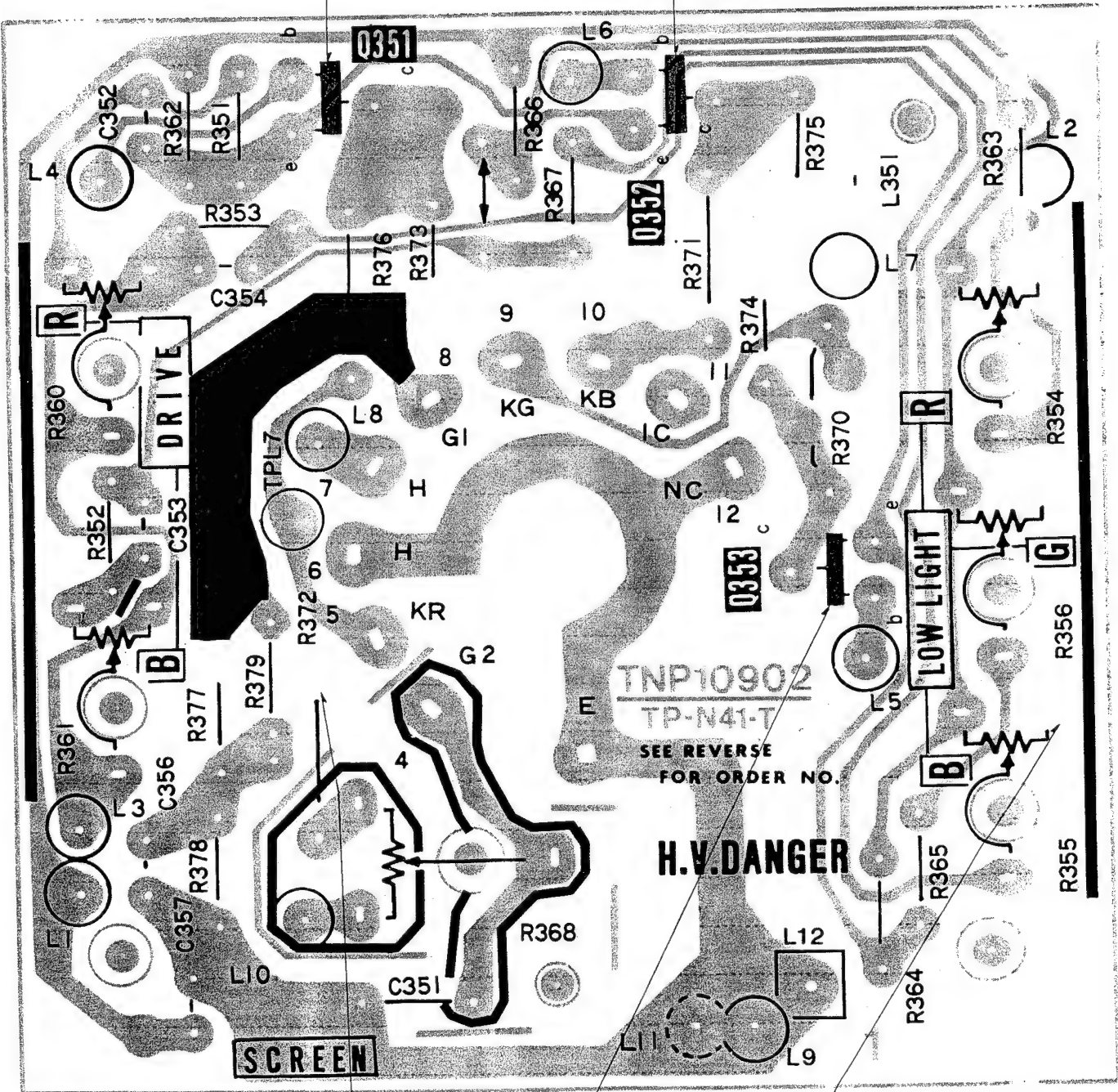
Handwriting practice area with horizontal dashed lines.

CONDUCTOR VIEWS

CRT-BOARD TNP10902AB

Q351
C 108.8V
B 8.2V
E 7.6V

Q352
C 116.0V
B 8.1V
E 7.6V

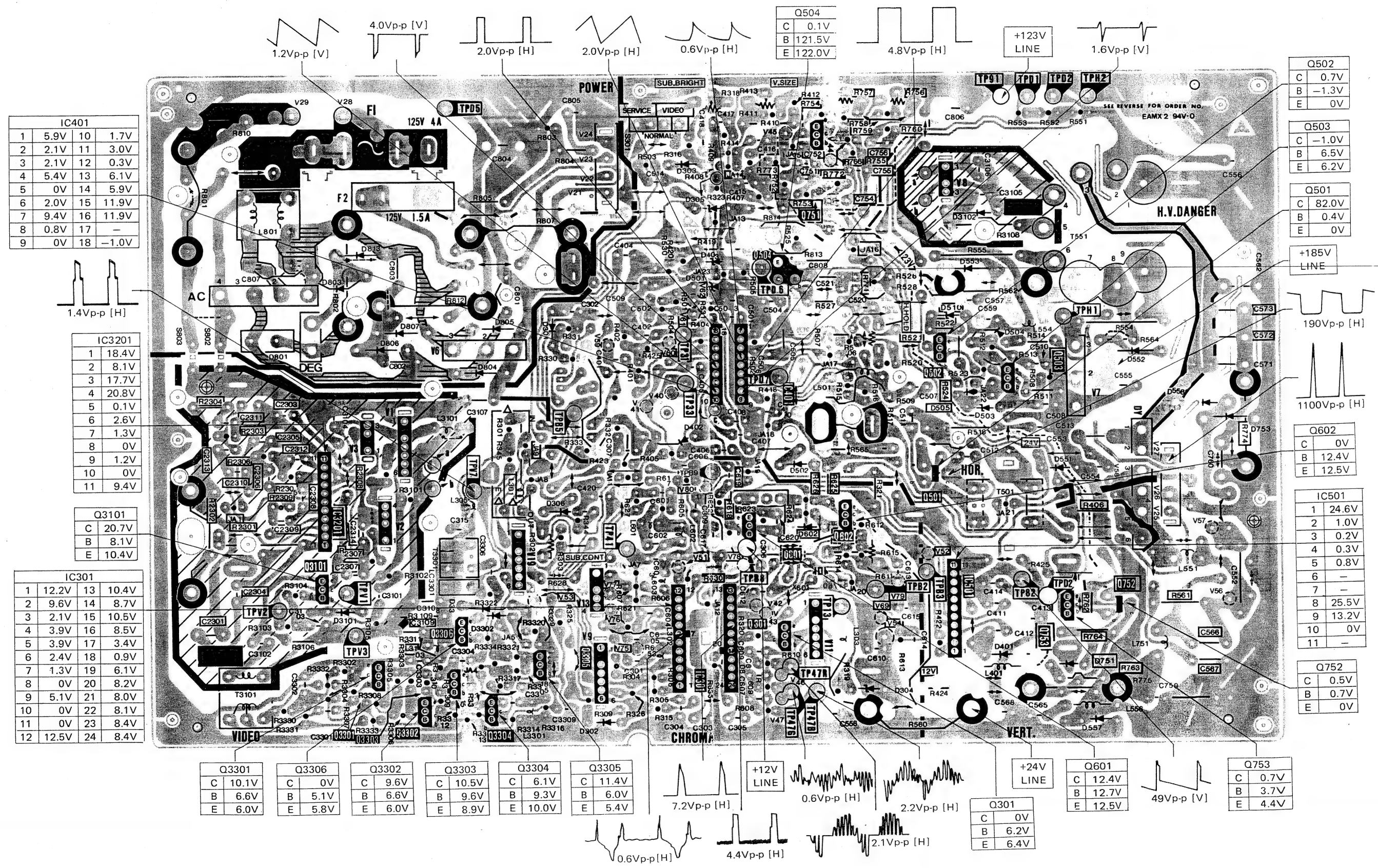


+123V
LINE

Q353
C 118.8V
B 8.0V
E 7.5V

+12V
LINE

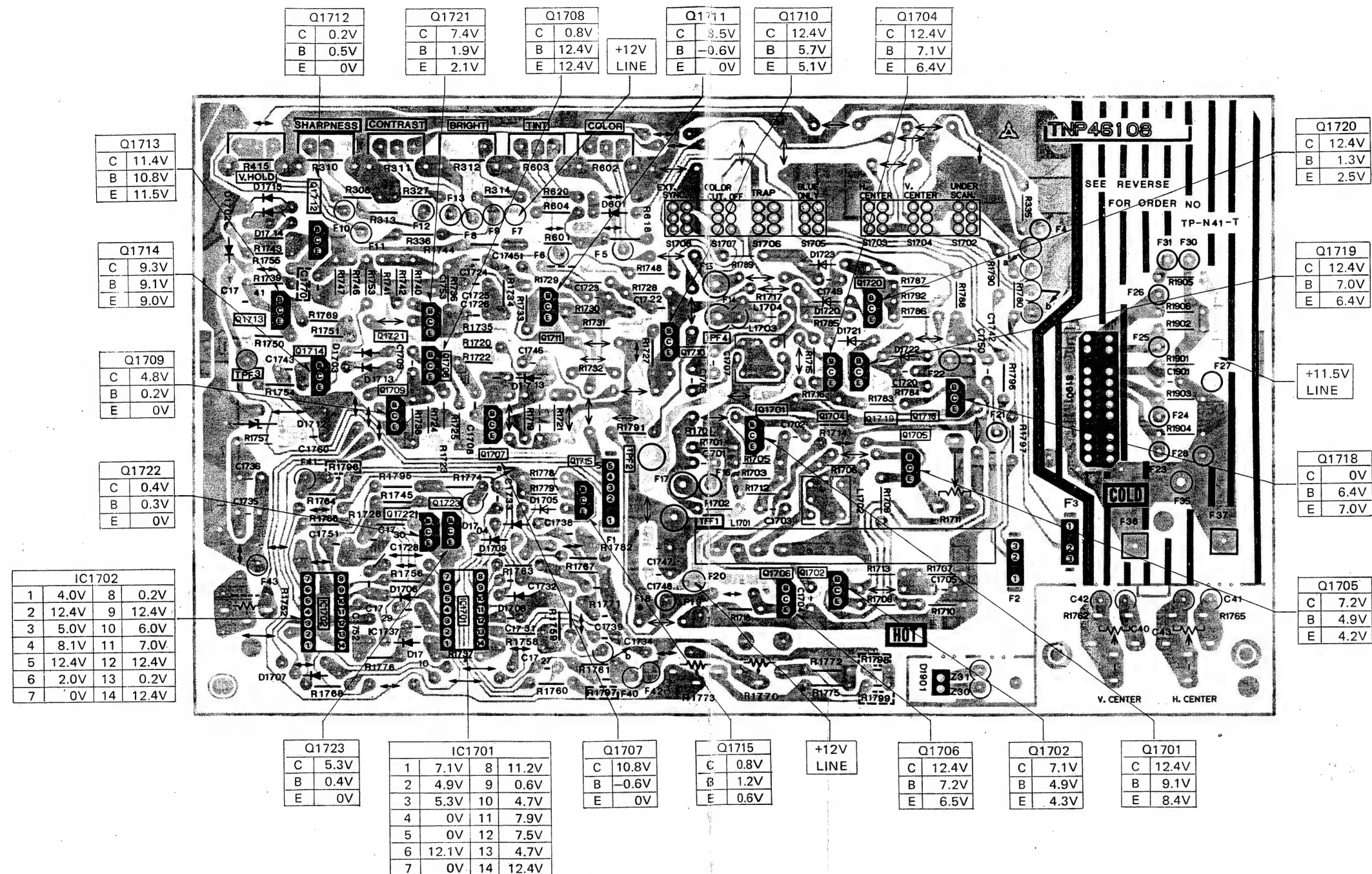
MAIN (V)-BOARD TNP65826ZA



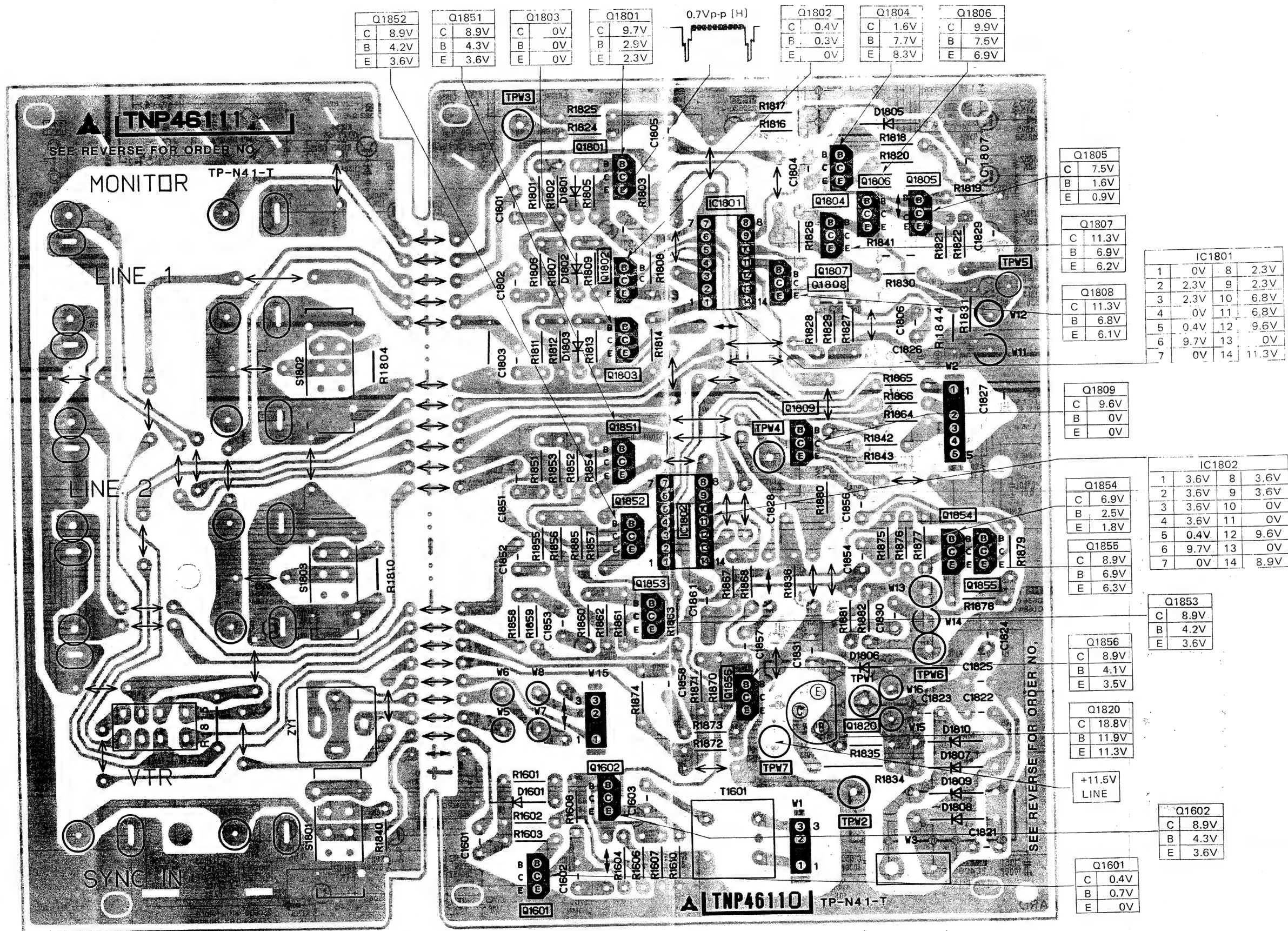
Note: Marked "●" on the printed circuit board shows cylindrical chip fixed resistor.

BT-S1900N BT-S1900N

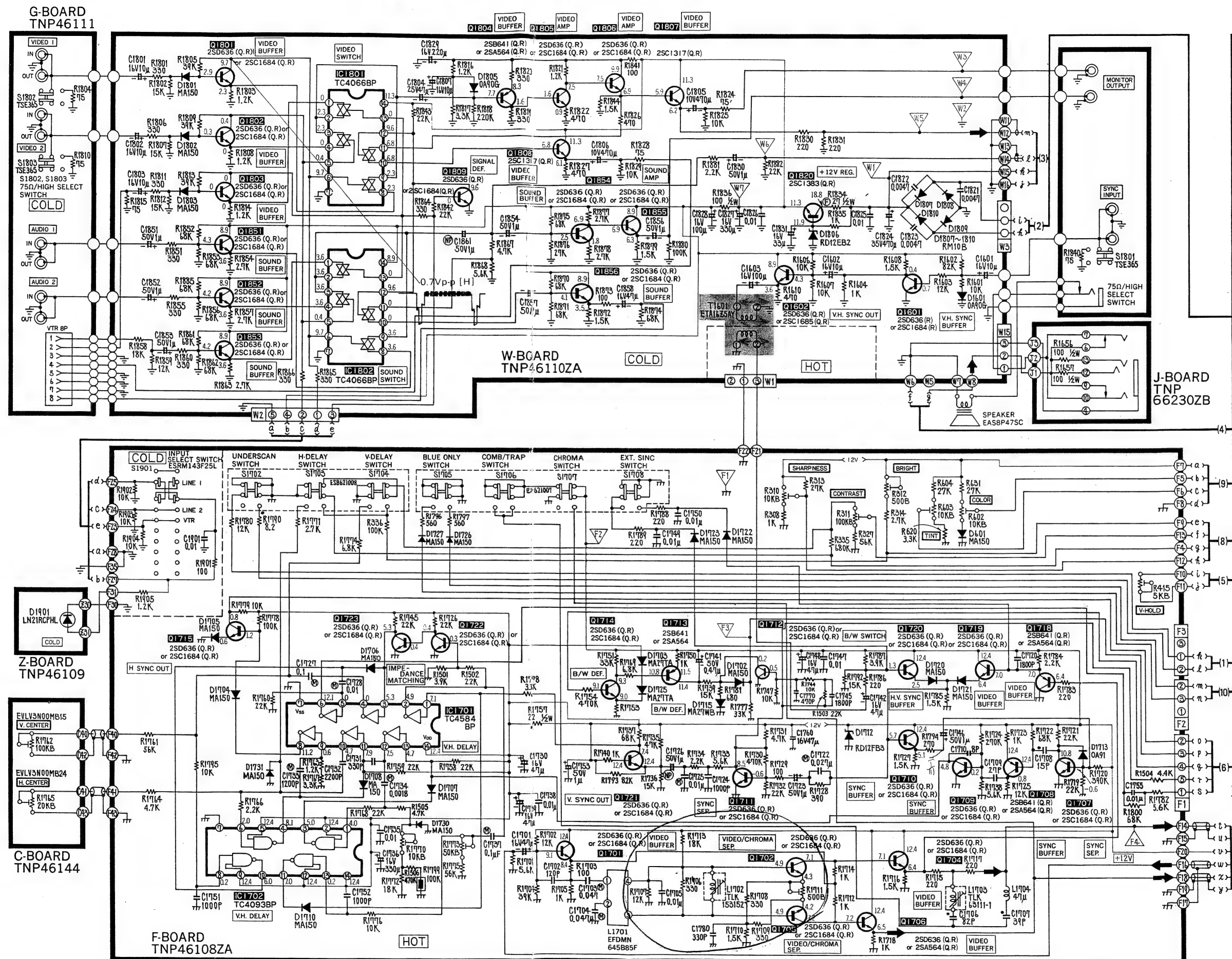
F-BOARD TNP46108ZA



G-BOARD TNP46111
W-BOARD TNP46110ZA



BT-S1900N **BT-S1900N**



SCHEMATIC DIAGRAM FOR MODEL BT-S1900N (CHASSIS NO. GX-V1)

NOTE:

1. RESISTOR

All resistors are carbon 1/4W resistor, unless otherwise noted the following marks.
Unit of resistance is OHM (Ω), (K = 1,000, M = 1,000,000).

- | | |
|--|---|
| Δ : Solid | $\text{---}\text{---}\text{---}$: Thermistor |
| \square : Wire Wound | \otimes : Fuse |
| $\text{---}\text{---}\text{---}$: Non-Flammable | \bullet : Metal Oxide |
| \blacksquare : Cement | $\text{---}\text{---}\text{---}$: Lead Less Type |

2. CAPACITOR

All capacitors are ceramic 50V capacitor, unless otherwise noted the following marks.
Unit of capacitance is μF , unless otherwise noted.

- | | | |
|--|--|--|
| $\text{---}\text{---}\text{---}$: Electrolytic | $\text{---}\text{---}\text{---}$: Safety Vent | $\text{---}\text{---}\text{---}$: Polystyrene |
| $\text{---}\text{---}\text{---}$: Bipolar | $\text{---}\text{---}\text{---}$: Titanium Oxide | $\text{---}\text{---}\text{---}$: Polypropylene |
| $\text{---}\text{---}\text{---}$: Z Type | $\text{---}\text{---}\text{---}$: Temp Compensation | |
| $\text{---}\text{---}\text{---}$: Dipped Tantalum | $\text{---}\text{---}\text{---}$: Polyester | |

3. COIL

Unit of inductance is μH .

4. TEST POINT

Test point position

5. VOLTAGE MEASUREMENT

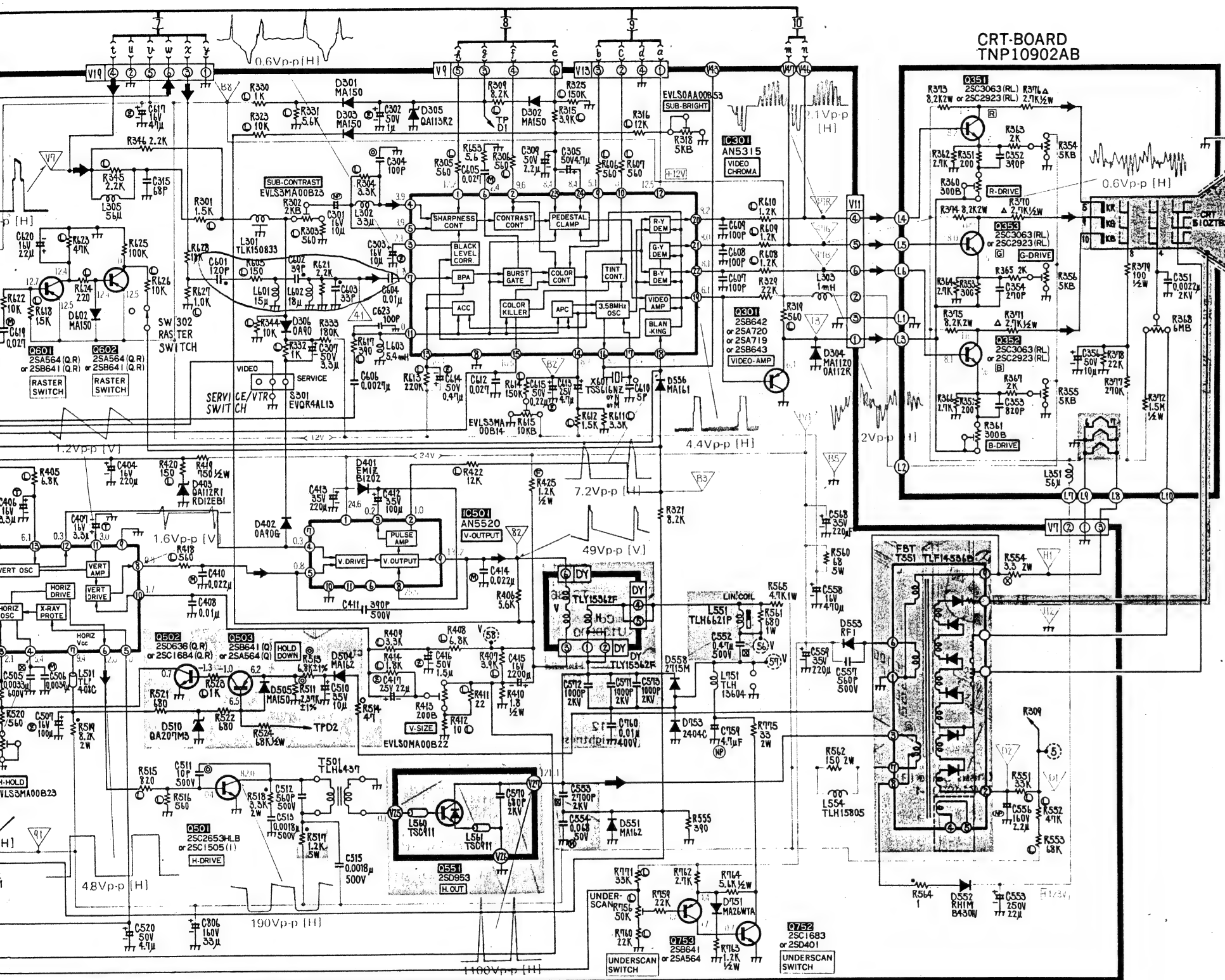
Voltage is measured by a VTVM receiving color bar signal, when all customer's controls are set to the maximum position.

6. When arrow mark (\rightarrow) is found, connection is easily found along with the direction of an arrow.

7. When schematic diagram of a board is described in more than two places, they are encircled with dotted line.

8. This schematic diagram is the latest at the time of printing and subject to change without notice.

9. \rightarrow : Indicates the main signal flow.

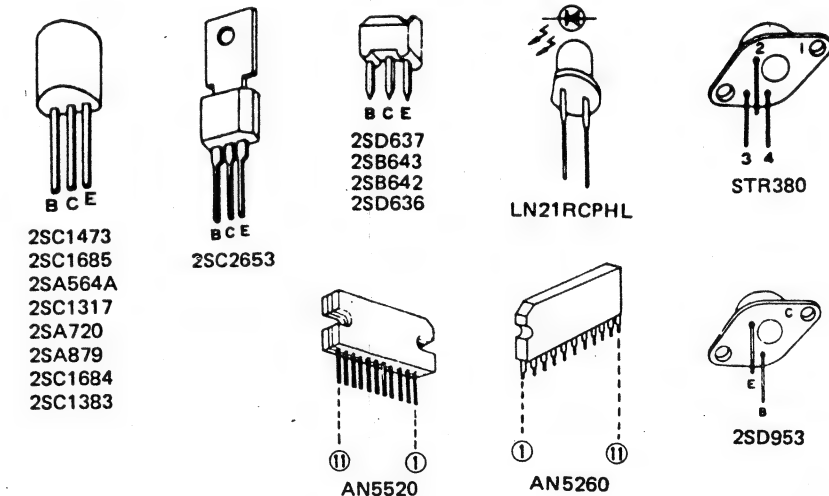


Note: The Power Circuit board contains a circuit area which uses a separate power supply to isolate the ground connection.

The circuit is defined by HOT and COLD indications in the schematic diagram. Take the following precautions.

PRECAUTIONS

1. Do not touch the hot part or the hot and cold parts at the same time or you may receive a shock.
2. Do not short-circuit the hot and cold circuits or a fuse may blow and parts may break.
3. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously or a fuse may blow. Connect the ground of instruments to the ground connection of the circuit being measured.
4. Make sure to disconnect the power plug before removing the chassis.



MA1200.... Black Red

RH1M
EM1Z
C2715M
B2404
EM1Z
CO508
RM10B

QA112R
QA112R1
QA113R2
RD12FB3
RD12EB2

OA90G... Green

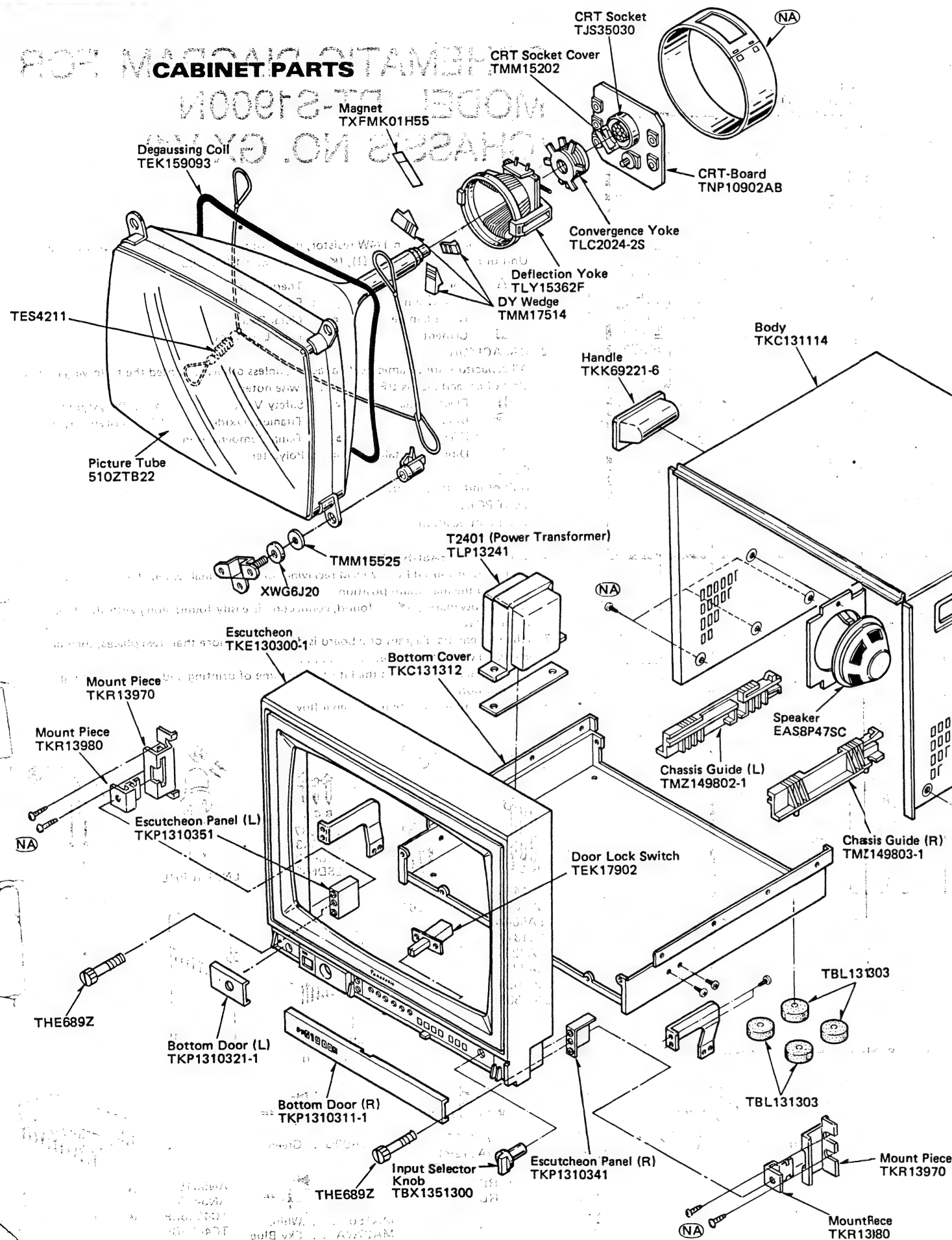
MA150.... White
MA27WA... Sky Blue
MA161.... Green

AN5315....
AN5436....
TC4068BP...
TC4093BP
TC4584BP

EXPLODED VIEWS

NOTE: Parts or Components marked with (NA) and unlisted are not available as a replacement parts.

CABINET PARTS



CHASSIS PARTS

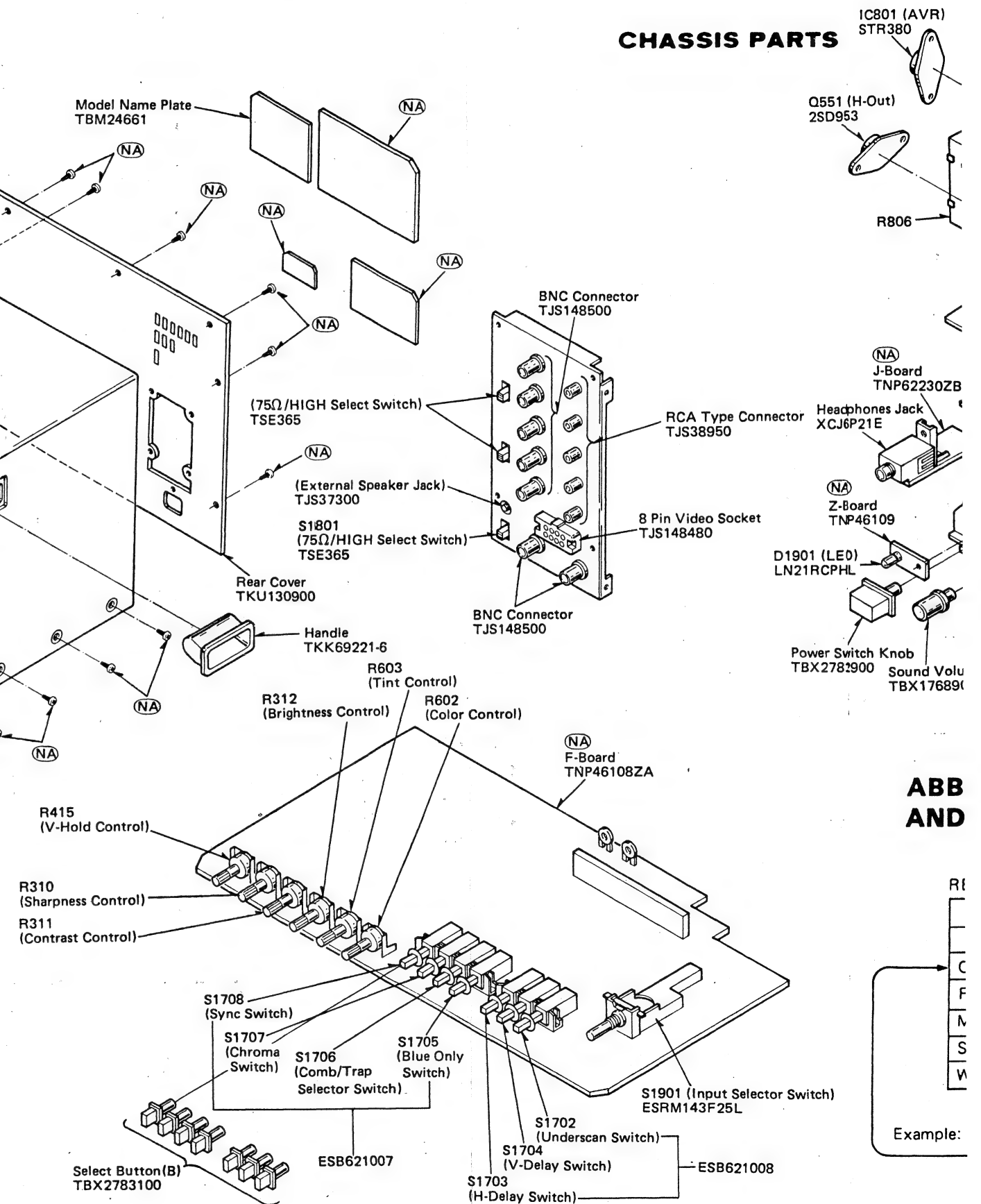
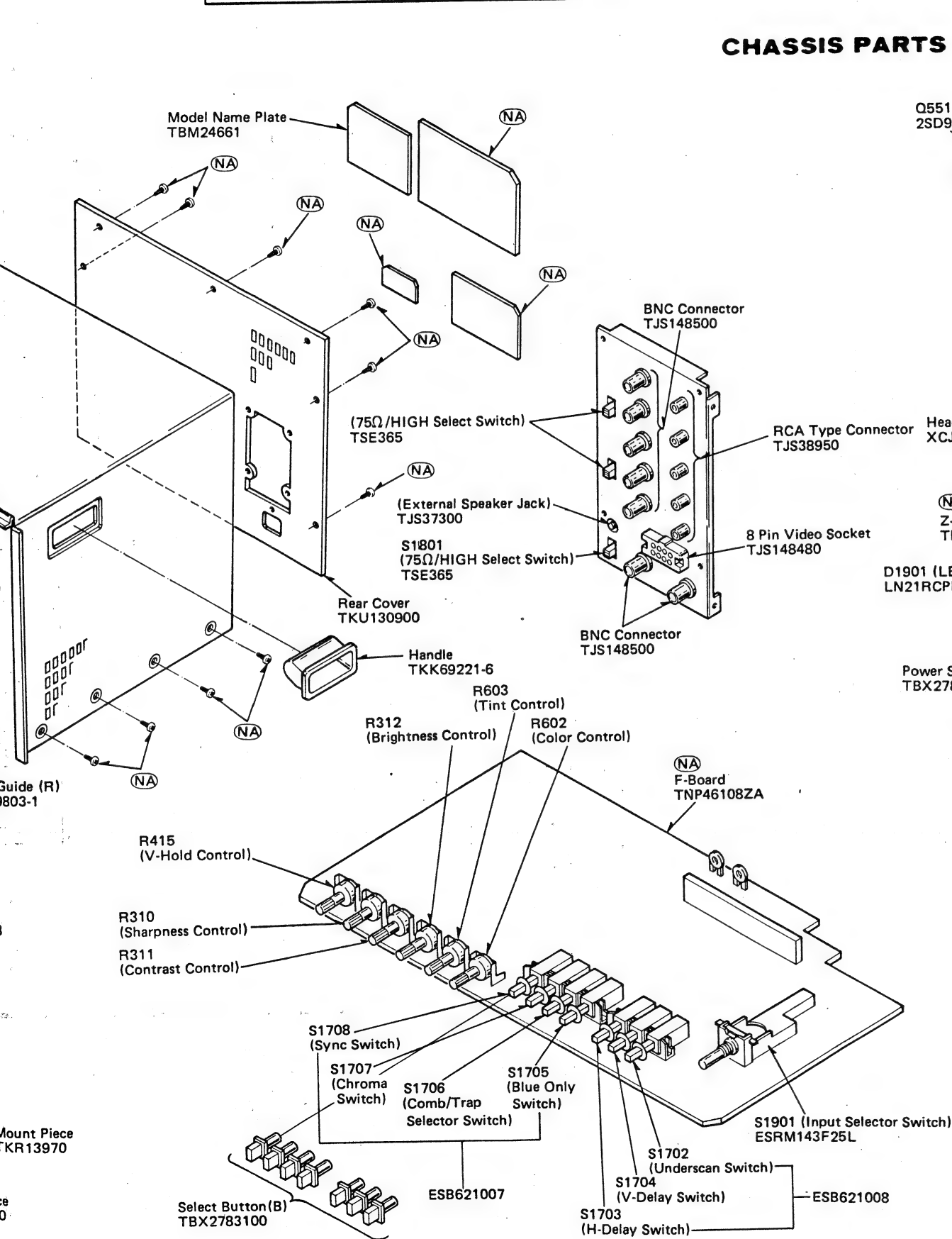


ABB
AND

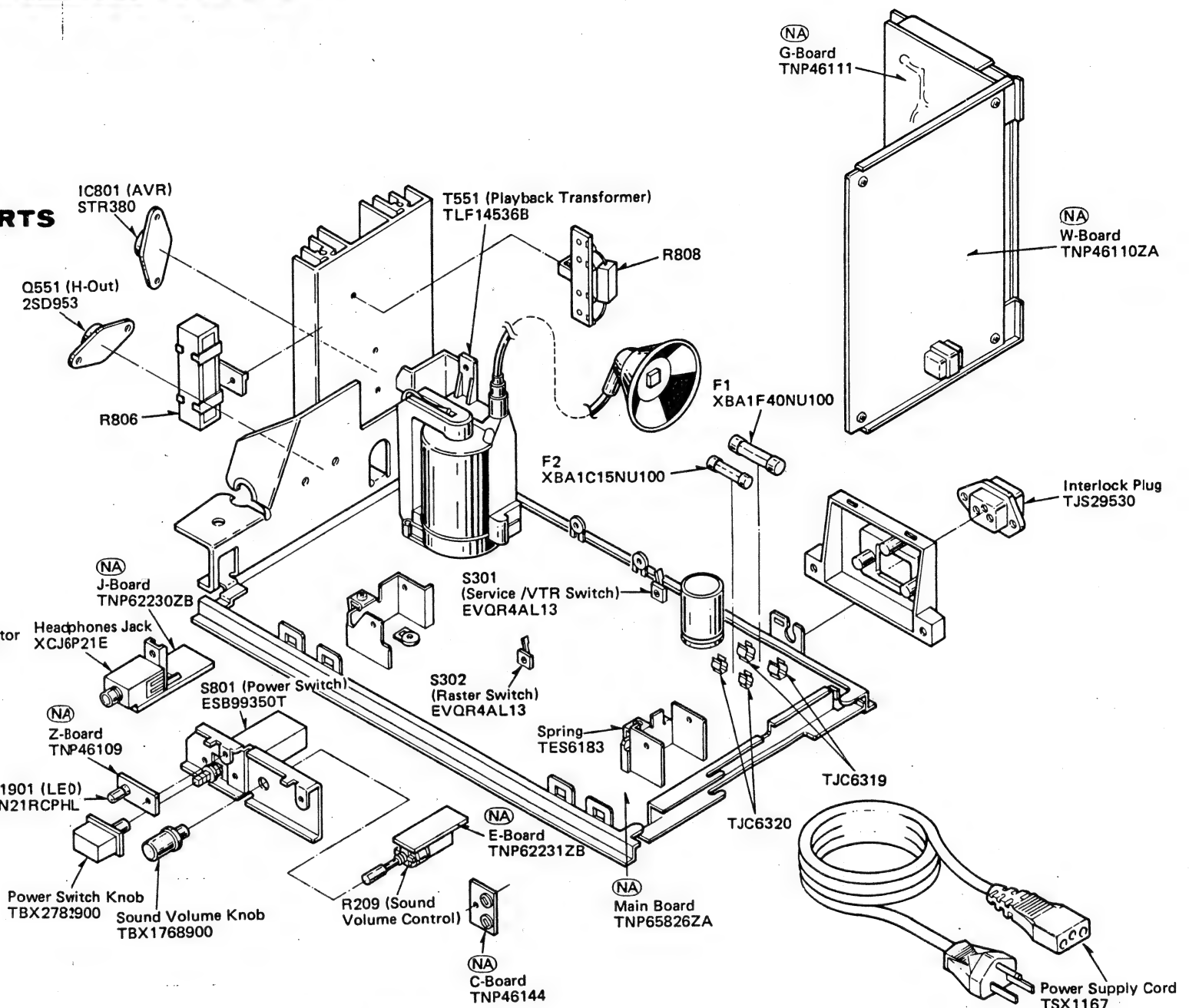
Example:

EXPLODED VIEWS

NOTE: Parts or Components marked with (NA) and unlisted are not available as a replacement parts.



CHASSIS PARTS



ABBREVIATION OF PART NAME AND DESCRIPTION

RESISTOR			
PART NAME & DESCRIPTION			
TYPE		ALLOWANCE	
C	Carbon	F	± 1%
F	Fuse	J	± 5%
M	Metal Oxide	K	± 10%
S	Solid	M	± 20%
W	Wire Wound	G	± 2%

Part No. Description

Example: ERD12TJ104 © 100K 1/2W

CAPACITOR			
PART NAME & DESCRIPTION			
TYPE		ALLOWANCE	
C	Ceramic	C	±0.25pF
E	Electrolytic	D	±0.5pF
P	Polyester	F	±1pF
S	Styrol	J	±5%
T	Tantalum	K	±10%
V	Trimmer	L	±15%
		M	±20%
		P	+100%—0%
		Z	+80%—20%

Part No. Description

Example: ECKD1H103PF2 © 0.01uF 50V

REPLACEMENT PARTS LIST

Important Safety Notice

Components identified by shaded area have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

Note: TNP65826ZA (Main-Board), TNP62231ZB (E-Board), TNP46108ZA (F-Board), TNP46111 (G-Board), TNP62230ZB (J-Board), TNP46110ZA (W-Board) and TNP46109 (Z-Board) are not available as a complete printed circuit board.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
	RESISTORS				
R 209	EVJUEA029A14	CONTROL 10KOHMA	R 363	ERD25TJ202	C 2KOHM, J, 1/4W
R 301	ERD25TLJ152	C 1.5KOHM, J, 1/4W	R 364	ERD25TJ272	C 2.7KOHM, J, 1/4W
R 302	EVLS3MA00B23	CONTROL 2KOHMB	R 365	ERD25TJ202	C 2KOHM, J, 1/4W
R 303	ERD25TLJ561	C 560OHM, J, 1/4W	R 366	ERD25TJ272	C 2.7KOHM, J, 1/4W
R 304	ERD25TLJ332	C 3.3KOHM, J, 1/4W	R 367	ERD25TJ202	C 2KOHM, J, 1/4W
R 305	ERD25TLJ561	C 560OHM, J, 1/4W	R 368	EVME6U10KB66	CONTROL 6MOHMB
R 306	ERD25TLJ561	C 560OHM, J, 1/4W	R 370	ERC12GK272	S 2.7KOHM, K, 1/2W
R 308	ERD25TJ102	C 1KOHM, J, 1/4W	R 371	ERC12GK272	S 2.7KOHM, K, 1/2W
R 309	ERD25TLJ822	C 8.2KOHM, J, 1/4W	R 372	ERC12GK155	S 1.5MOHM, K, 1/2W
R 310	EVJECAEO4B14	CONTROL 10KOHMB	R 373	ERG2ANJ822	M 8.2KOHM, J, 2W
R 311	EVJEEAE04B15	CONTROL 100KOHMB	R 374	ERG2ANJ822	M 8.2KOHM, J, 2W
R 312	EVJEBAE04B52	CONTROL 500OHMB	R 375	ERG2ANJ822	M 8.2KOHM, J, 2W
R 313	ERD25TJ273	C 27KOHM, J, 1/4W	R 376	ERC12GK272	S 2.7KOHM, K, 1/2W
R 314	ERD25TJ272	C 2.7KOHM, J, 1/4W	R 377	ERD25TJ274	C 270KOHM, J, 1/4W
R 315	ERD25TLJ392	C 3.9KOHM, J, 1/4W	R 378	ERD25TJ223	C 22KOHM, J, 1/4W
R 316	ERD25TLJ123	C 12KOHM, J, 1/4W	R 379	ERD50FJ101	C 100OHM, J, 1/2W
R 318	EVLS0MA00B53	CONTROL 5KOHMB	R 401	ERD25TLJ271	C 270OHM, J, 1/4W
R 319	ERD25TLJ561	C 560OHM, J, 1/4W	R 402	ERD25TLJ393	C 39KOHM, J, 1/4W
R 320	ERD25TJ561	C 560OHM, J, 1/4W	R 404	ERD25TLJ684	C 680KOHM, J, 1/4W
R 321	ERD25TJ822	C 8.2KOHM, J, 1/4W	R 405	ERD25TLJ682	C 6.8KOHM, J, 1/4W
R 323	ERD25TLJ103	C 10KOHM, J, 1/4W	R 406	ERD50FJ562	C 5.6KOHM, J, 1/2W
R 325	ERD25TLJ154	C 150KOHM, J, 1/4W	R 407	ERD25TLJ392	C 3.9KOHM, J, 1/4W
R 327	ERD25TJ563	C 56KOHM, J, 1/4W	R 408	ERD25TLJ682	C 6.8KOHM, J, 1/4W
R 329	ERD25TJ223	C 22KOHM, J, 1/4W	R 409	ERD25TLJ332	C 3.3KOHM, J, 1/4W
R 330	ERD25TLJ102	C 1KOHM, J, 1/4W	R 410	ERW12PK1R8	W 1.8OHM, 1/2W
R 331	ERD25TLJ562	C 5.6KOHM, J, 1/4W	R 411	ERD25TLJ220	C 22OHM, J, 1/4W
R 332	ERD25TLJ102	C 1KOHM, J, 1/4W	R 412	ERD25TLJ100	C 100OHM, J, 1/4W
R 333	ERD25TLJ184	C 180KOHM, J, 1/4W	R 413	EVLS0MA00B22	CONTROL 200OHMB
R 335	ERD25TJ684	C 680KOHM, J, 1/4W	R 414	ERD25TLJ182	C 1.8KOHM, J, 1/4W
R 336	ERD25TJ104	C 100KOHM, J, 1/4W	R 415	EVJEEAE04B53	CONTROL 5KOHMB
R 344	ERD25TLJ103	C 10KOHM, J, 1/4W	R 418	ERD25TLJ561	C 560OHM, J, 1/4W
R 345	ERD25TLJ222	C 2.2KOHM, J, 1/4W	R 419	ERD50TJ751	C 750OHM, J, 1/2W
R 346	ERD25TJ222	C 2.2KOHM, J, 1/4W	R 420	ERD25TLJ151	C 150OHM, J, 1/4W
R 351	ERD25TJ201	C 200OHM, J, 1/4W	R 422	ERD25TLJ123	C 12KOHM, J, 1/4W
R 352	ERD25TJ201	C 200OHM, J, 1/4W	R 423	ERD25TLJ101	C 100OHM, J, 1/4W
R 353	ER025CKF3000	M 300OHM, F, 1/4W	R 425	ERD50FJ122	C 1.2KOHM, J, 1/2W
R 354	EVLS3MA00B53	CONTROL 5KOHMB	R 501	ERD25TLJ472	C 4.7KOHM, J, 1/4W
R 355	EVLS3MA00B53	CONTROL 5KOHMB	R 502	ERD25TLJ123	C 12KOHM, J, 1/4W
R 356	EVLS3MA00B53	CONTROL 5KOHMB	R 503	ERD25TLJ392	C 3.9KOHM, J, 1/4W
R 360	EVLS3MA00B32	CONTROL 300OHMB	R 504	ERD25TLJ681	C 680OHM, J, 1/4W
R 361	EVLS3MA00B32	CONTROL 300OHMB	R 505	ERD25TLJ222	C 2.2KOHM, J, 1/4W
R 362	ERD25TJ272	C 2.7KOHM, J, 1/4W	R 506	ERD25TLJ222	C 2.2KOHM, J, 1/4W
			R 507	EVLS3MA00B23	CONTROL 2KOHMB
			R 509	ERG2ANJ822H	M 8.2KOHM, J, 2W

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
R 511	ER025CKF2371	M 23700HM, J, 1/4W	R 620	ERD25TJ332	C 3.3KOHM, J, 1/4W
R 513	ER025CKF6801	M 6.8KOHM, J, 1/4W	R 621	ERD25TLJ222	C 2.2KOHM, J, 1/4W
R 514	ERD25FJ470	C 470HM, J, 1/4W	R 622	ERD25TLJ103	C 10KOHM, J, 1/4W
R 515	ERD25TLJ821	C 8200HM, J, 1/4W	R 623	ERD25TLJ473	C 47KOHM, J, 1/4W
R 516	ERD25TLJ561	C 5600HM, J, 1/4W	R 624	ERD25TLJ221	C 2200HM, J, 1/4W
R 517	ERG5ZJ122	M 1.2KOHM, J, 5W	R 625	ERD25TJ104	C 100KOHM, J, 1/4W
R 518	ERG2ANJ332H	M 3.3KOHM, J, 2W	R 626	ERD25TLJ103	C 10KOHM, J, 1/4W
R 520	ERD25TLJ561	C 5600HM, J, 1/4W	R 627	ERD25TLJ102	C 1KOHM, J, 1/4W
R 521	ERD25TJ681	C 6800HM, J, 1/4W	R 628	ERD25TJ183	C 18KOHM, J, 1/4W
R 522	ERD25TJ681	C 6800HM, J, 1/4W	R 631	ERD25TJ273	C 27KOHM, J, 1/4W
R 523	ERD25TLJ102	C 1KOHM, J, 1/4W	R 653	ERD25TJ5R6	C 5.60HM, J, 1/4W
R 524	ERDS1TJ683	C 68KOHM, J, 1/2W	R 756	EVLS0MA00B54	CONTROL 50KOHMB
R 525	ERD25TLJ103	C 10KOHM, J, 1/4W	R 759	ERD25TLJ223	C 22KOHM, J, 1/4W
R 526	ER025CKF1003	M 100KOHM, F, 1/4W	R 760	ERD25TLJ223	C 22KOHM, J, 1/4W
R 527	ER025CKF5603	M 560KOHM, F, 1/4W	R 762	ERD25TJ272	C 2.7KOHM, J, 1/4W
R 528	ER025CKF8201	M 8.2KOHM, F, 1/4W	R 763	ERDS1TJ122	C 1.2KOHM, J, 1/2W
R 530	ERD25TLJ123	C 12KOHM, J, 1/4W	R 764	ERDS1TJ562	C 5.6KOHM, J, 1/2W
R 531	ERD25TLJ472	C 4.7KOHM, J, 1/4W	R 771	ERD25TLJ333	C 33KOHM, J, 1/4W
R 551	ERD25TLJ333	C 33KOHM, J, 1/4W	R 775	ERF2AJ330	W 330HM, J, 2W
R 552	ERD25TLJ473	C 47KOHM, J, 1/4W	R 802	ERF5AJ680	W 680HM, J, 5W
R 553	ERD25TLJ683	C 68KOHM, J, 1/4W	R 803	ERD25TLJ184	C 180KOHM, J, 1/4W
R 554	ERQ2CJP3R3S	F 3.30HM, J, 2W	R 804	ERD25FJ470	C 470HM, J, 1/4W
R 555	ERD25TJ391	C 3900HM, J, 1/4W	R 805	ERD50FJ123	C 12KOHM, J, 1/2W
R 560	ERF5AJ680	W 680HM, J, 5W	R 806	ERF30HT191	W 1900HM, 30W
R 561	ERG1ANJ681H	M 6800HM, J, 1W	R 807	ERF5AK4R7	W 4.70HM, K, 5W
R 562	ERG2CJ151	M 1500HM, J, 2W	R 808	ERF5AJ150	W 150HM, J, 5W
R 564	ERD25FJ1R0	C 10HM, J, 1/4W	R 810	ERC12ZGK824	S 820KOHM, K, 1/2W
R 565	ERG1ANJ472H	M 4.7KOHM, J, 1W	R 812	ERF5AKR82	W .820HM, K, 5W
R 602	EVJEA0E04B14	CONTROL 10KOHMB	R 813	ERD50FJ1R0	C 10HM, J, 1/2W
R 603	EVJEA0E04B14	CONTROL 10KOHMB	R 814	ERD50FJ1R0	C 10HM, J, 1/2W
R 604	ERD25TJ273	C 27KOHM, J, 1/4W	R 1501	ERD25TJ392	C 3.9KOHM, J, 1/4W
R 605	ERD25TLJ151	C 1500HM, J, 1/4W	R 1502	ERD25TJ223	C 22KOHM, J, 1/4W
R 606	ERD25TLJ561	C 5600HM, J, 1/4W	R 1503	ERD25TJ223	C 22KOHM, J, 1/4W
R 607	ERD25TLJ561	C 5600HM, J, 1/4W	R 1504	ERD25TJ222	C 2.2KOHM, J, 1/4W
R 608	ERD25TLJ122	C 1.2KOHM, J, 1/4W	R 1505	ERD25TJ472	C 4.7KOHM, J, 1/4W
R 609	ERD25TLJ122	C 1.2KOHM, J, 1/4W	R 1506	ERD25TJ474	C 470KOHM, J, 1/4W
R 610	ERD25TLJ122	C 1.2KOHM, J, 1/4W	R 1601	ERD25TJ103	C 10KOHM, J, 1/4W
R 611	ERD25TLJ332	C 3.3KOHM, J, 1/4W	R 1602	ERD25TJ823	C 82KOHM, J, 1/4W
R 612	ERD25TLJ152	C 1.5KOHM, J, 1/4W	R 1603	ERD25TJ123	C 12KOHM, J, 1/4W
R 613	ERD25TLJ224	C 220KOHM, J, 1/4W	R 1604	ERD25TJ102	C 1KOHM, J, 1/4W
R 614	ERD25TLJ154	C 150KOHM, J, 1/4W	R 1606	ERD25TJ103	C 10KOHM, J, 1/4W
R 615	EVLS3MA00B14	CONTROL 10KOHMB	R 1607	ERD25TJ103	C 10KOHM, J, 1/4W
R 617	ERD25TLJ391	C 3900HM, J, 1/4W	R 1608	ERD25TJ152	C 1.5KOHM, J, 1/4W
R 618	ERD25TLJ153	C 15KOHM, J, 1/4W	R 1610	ERD25TJ471	C 4700HM, J, 1/4W

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
R 1656	ERDS1TJ101	C 1000HM, J, 1/2W	R 1747	ERD25TJ103	C 10KOHM, J, 1/4W
R 1657	ERDS1TJ101	C 1000HM, J, 1/2W	R 1750	ERD25TJ102	C 1KOHM, J, 1/4W
R 1701	ERD25TJ562	C 5.6KOHM, J, 1/4W	R 1751	ERD25TJ333	C 33KOHM, J, 1/4W
R 1702	ERD25TJ123	C 12KOHM, J, 1/4W	R 1753	ERD25TJ103	C 10KOHM, J, 1/4W
R 1703	ERD25TJ101	C 1000HM, J, 1/4W	R 1754	ERD25TJ474	C 470KOHM, J, 1/4W
R 1704	ERD25TJ393	C 39KOHM, J, 1/4W	R 1757	ERDS1FJ220	C 220HM, J, 1/2W
R 1705	ERD25TJ102	C 1KOHM, J, 1/4W	R 1758	ERD25TJ223	C 22KOHM, J, 1/4W
R 1706	ERD25TJ331	C 3300HM, J, 1/4W	R 1759	ERD25TJ223	C 22KOHM, J, 1/4W
R 1707	ERD25TJ123	C 12KOHM, J, 1/4W	R 1760	ERD25TJ223	C 22KOHM, J, 1/4W
R 1708	ERD25TJ331	C 3300HM, J, 1/4W	R 1761	ERD25TJ563	C 56KOHM, J, 1/4W
R 1709	ERD25TJ331	C 3300HM, J, 1/4W	R 1762	EVLV3N00MB15	CONTROL 100KOHMB
R 1710	ERD25TJ152	C 1.5KOHM, J, 1/4W	R 1763	ERD25TJ122	C 1.2KOHM, J, 1/4W
R 1711	EVLS3MA00B52	CONTROL 5000HMB	R 1764	ERD25TJ472	C 4.7KOHM, J, 1/4W
R 1712	ERD25TJ102	C 1KOHM, J, 1/4W	R 1765	EVLV3N00MB24	CONTROL 20KOHMB
R 1713	ERD25TJ183	C 18KOHM, J, 1/4W	R 1766	ERD25TJ222	C 2.2KOHM, J, 1/4W
R 1714	ERD25TJ102	C 1KOHM, J, 1/4W	R 1767	ERD25TJ332	C 3.3KOHM, J, 1/4W
R 1715	ERD25TJ221	C 2200HM, J, 1/4W	R 1768	ERD25TJ222	C 2.2KOHM, J, 1/4W
R 1716	ERD25TJ152	C 1.5KOHM, J, 1/4W	R 1769	ERD25TJ682	C 6.8KOHM, J, 1/4W
R 1717	ERD25TJ221	C 2200HM, J, 1/4W	R 1770	EVLS0MA00B14	CONTROL 10KOHMB
R 1718	ERD25TJ102	C 1KOHM, J, 1/4W	R 1771	ERD25TJ272	C 2.7KOHM, J, 1/4W
R 1719	ERD25TJ223	C 22KOHM, J, 1/4W	R 1772	ERD25TJ183	C 18KOHM, J, 1/4W
R 1720	ERD25TJ394	C 390KOHM, J, 1/4W	R 1773	EVLS0MA00B54	CONTROL 50KOHMB
R 1721	ERD25TJ223	C 22KOHM, J, 1/4W	R 1774	ERD25TJ682	C 6.8KOHM, J, 1/4W
R 1722	ERD25TJ683	C 68KOHM, J, 1/4W	R 1775	ERD25TJ563	C 56KOHM, J, 1/4W
R 1723	ERD25TJ102	C 1KOHM, J, 1/4W	R 1776	ERD25TJ103	C 10KOHM, J, 1/4W
R 1724	ERD25TJ274	C 270KOHM, J, 1/4W	R 1777	ERD25TJ333	C 33KOHM, J, 1/4W
R 1725	ERD25TJ123	C 12KOHM, J, 1/4W	R 1778	ERD25TJ104	C 100KOHM, J, 1/4W
R 1726	ERD25TJ223	C 22KOHM, J, 1/4W	R 1779	ERD25TJ103	C 10KOHM, J, 1/4W
R 1727	ERD25TJ152	C 1.5KOHM, J, 1/4W	R 1779	ERTD2ZHK104S	THERMISTER
R 1728	ERD25TJ391	C 3900HM, J, 1/4W	R 1780	ERD25TJ123	C 12KOHM, J, 1/4W
R 1729	ERD25TJ101	C 1000HM, J, 1/4W	R 1781	ERD25TJ681	C 6800HM, J, 1/4W
R 1730	ERD25TJ474	C 470KOHM, J, 1/4W	R 1782	ERD25TJ562	C 5.6KOHM, J, 1/4W
R 1731	ERD25TJ472	C 4.7KOHM, J, 1/4W	R 1783	ERD25TJ221	C 2200HM, J, 1/4W
R 1732	ERD25TJ223	C 22KOHM, J, 1/4W	R 1784	ERD25TJ222	C 2.2KOHM, J, 1/4W
R 1733	ERD25TJ562	C 5.6KOHM, J, 1/4W	R 1785	ERD25TJ152	C 1.5KOHM, J, 1/4W
R 1734	ERD25TJ222	C 2.2KOHM, J, 1/4W	R 1786	ERD25TJ221	C 2200HM, J, 1/4W
R 1735	ERD25TJ473	C 47KOHM, J, 1/4W	R 1787	ERD25TJ392	C 3.9KOHM, J, 1/4W
R 1736	ERD25TJ153	C 15KOHM, J, 1/4W	R 1788	ERD25TJ221	C 2200HM, J, 1/4W
R 1737	ERD25TJ683	C 68KOHM, J, 1/4W	R 1789	ERD25TJ221	C 2200HM, J, 1/4W
R 1738	ERD25TJ562	C 5.6KOHM, J, 1/4W	R 1790	ERD25FJ8R2	C 8.20HM, J, 1/4W
R 1739	ERD25TJ153	C 15KOHM, J, 1/4W	R 1792	ERD25TJ153	C 15KOHM, J, 1/4W
R 1740	ERD25TJ102	C 1KOHM, J, 1/4W	R 1793	ERD25TJ822	C 8.2KOHM, J, 1/4W
R 1744	ERD25TJ103	C 10KOHM, J, 1/4W	R 1794	ERD25TJ271	C 2700HM, J, 1/4W
R 1745	ERD25TJ223	C 22KOHM, J, 1/4W	R 1795	ERD25TJ103	C 10KOHM, J, 1/4W

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Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
R 1796	ERD25TJ561	C 560OHM, J, 1/4W	R 1853	ERD25TJ683	C 68KOHM, J, 1/4W
R 1797	ERD25TJ561	C 560OHM, J, 1/4W	R 1854	ERD25TJ272	C 2.7KOHM, J, 1/4W
R 1798	ERD25TJ332	C 3.3KOHM, J, 1/4W	R 1855	ERD25TJ331	C 330OHM, J, 1/4W
R 1800	ERD25TJ683	C 68KOHM, J, 1/4W	R 1856	ERD25TJ683	C 68KOHM, J, 1/4W
R 1801	ERD25TJ331	C 330OHM, J, 1/4W	R 1857	ERD25TJ272	C 2.7KOHM, J, 1/4W
R 1802	ERD25TJ153	C 15KOHM, J, 1/4W	R 1858	ERD25TJ183	C 18KOHM, J, 1/4W
R 1803	ERD25TJ122	C 1.2KOHM, J, 1/4W	R 1859	ERD25TJ123	C 12KOHM, J, 1/4W
R 1804	ERD25TJ750	C 750HM, J, 1/4W	R 1860	ERD25TJ331	C 330OHM, J, 1/4W
R 1805	ERD25TJ393	C 39KOHM, J, 1/4W	R 1861	ERD25TJ683	C 68KOHM, J, 1/4W
R 1806	ERD25TJ331	C 330OHM, J, 1/4W	R 1862	ERD25TJ683	C 68KOHM, J, 1/4W
R 1807	ERD25TJ153	C 15KOHM, J, 1/4W	R 1863	ERD25TJ272	C 2.7KOHM, J, 1/4W
R 1808	ERD25TJ122	C 1.2KOHM, J, 1/4W	R 1864	ERD25TJ331	C 330OHM, J, 1/4W
R 1809	ERD25TJ393	C 39KOHM, J, 1/4W	R 1865	ERD25TJ331	C 330OHM, J, 1/4W
R 1810	ERD25TJ750	C 750HM, J, 1/4W	R 1866	ERD25TJ331	C 330OHM, J, 1/4W
R 1811	ERD25TJ331	C 330OHM, J, 1/4W	R 1867	ERD25TJ472	C 4.7KOHM, J, 1/4W
R 1812	ERD25TJ153	C 15KOHM, J, 1/4W	R 1868	ERD25TJ562	C 5.6KOHM, J, 1/4W
R 1813	ERD25TJ393	C 39KOHM, J, 1/4W	R 1870	ERD25TJ683	C 68KOHM, J, 1/4W
R 1814	ERD25TJ122	C 1.2KOHM, J, 1/4W	R 1871	ERD25TJ683	C 68KOHM, J, 1/4W
R 1815	ERD25TJ750	C 750HM, J, 1/4W	R 1872	ERD25TJ152	C 1.5KOHM, J, 1/4W
R 1816	ERD25TJ122	C 1.2KOHM, J, 1/4W	R 1873	ERD25TJ101	C 100OHM, J, 1/4W
R 1817	ERD25TJ332	C 3.3KOHM, J, 1/4W	R 1874	ERD25TJ683	C 68KOHM, J, 1/4W
R 1818	ERD25TJ224	C 220KOHM, J, 1/4W	R 1875	ERD25TJ683	C 68KOHM, J, 1/4W
R 1819	ERD25TJ331	C 330OHM, J, 1/4W	R 1876	ERD25TJ273	C 27KOHM, J, 1/4W
R 1820	ERD25TJ331	C 330OHM, J, 1/4W	R 1877	ERD25TJ272	C 2.7KOHM, J, 1/4W
R 1821	ERD25TJ122	C 1.2KOHM, J, 1/4W	R 1878	ERD25TJ272	C 2.7KOHM, J, 1/4W
R 1822	ERD25TJ471	C 470OHM, J, 1/4W	R 1879	ERD25TJ152	C 1.5KOHM, J, 1/4W
R 1824	ERD25TJ750	C 750HM, J, 1/4W	R 1880	ERD25TJ104	C 100KOHM, J, 1/4W
R 1825	ERD25TJ103	C 10KOHM, J, 1/4W	R 1881	ERD25TJ222	C 2.2KOHM, J, 1/4W
R 1826	ERD25TJ471	C 470OHM, J, 1/4W	R 1882	ERD25TJ223	C 22KOHM, J, 1/4W
R 1827	ERD25TJ471	C 470OHM, J, 1/4W	R 1885	ERD25TJ683	C 68KOHM, J, 1/4W
R 1828	ERD25TJ750	C 750HM, J, 1/4W	R 1901	ERD25TJ101	C 100OHM, J, 1/4W
R 1829	ERD25TJ103	C 10KOHM, J, 1/4W	R 1902	ERD25TJ103	C 10KOHM, J, 1/4W
R 1830	ERD25TJ221	C 220OHM, J, 1/4W	R 1903	ERD25TJ103	C 10KOHM, J, 1/4W
R 1831	ERD25TJ221	C 220OHM, J, 1/4W	R 1904	ERD25TJ103	C 10KOHM, J, 1/4W
R 1834	ERDS1FJ270	C 270HM, J, 1/2W	R 1905	ERD25TJ122	C 1.2KOHM, J, 1/4W
R 1835	ERD25TJ102	C 1KOHM, J, 1/4W	R 2301	ERQ2CJP120S	F 120HM, J, 2W
R 1836	ERDS1FJ101	C 100OHM, J, 1/2W	R 2302	ERF5SJ560	W 560HM, J, 5W
R 1840	ERD25TJ750	C 750HM, J, 1/4W	R 2303	ERD25TLJ102	C 1KOHM, J, 1/4W
R 1841	ERDS1FJ101	C 100OHM, J, 1/2W	R 2304	ERD25FJ150	C 150HM, J, 1/4W
R 1842	ERD25TJ223	C 22KOHM, J, 1/4W	R 2307	ERD25TLJ332	C 3.3KOHM, J, 1/4W
R 1843	ERD25TJ223	C 22KOHM, J, 1/4W	R 2308	ERD25TLJ103	C 10KOHM, J, 1/4W
R 1844	ERD25TJ152	C 1.5KOHM, J, 1/4W	R 2309	ERD25TLJ222	C 2.2KOHM, J, 1/4W
R 1851	ERD25TJ331	C 330OHM, J, 1/4W	R 3102	ERD25TLJ331	C 330OHM, J, 1/4W
R 1852	ERD25TJ683	C 68KOHM, J, 1/4W	R 3103	ERD25TLJ182	C 1.8KOHM, J, 1/4W

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
R 3104	ERD25TLJ223	C 22KOHM, J, 1/4W	C 401	ECEA50ZR68	E 0.68UF, 50V
R 3105	ERD25TLJ473	C 47KOHM, J, 1/4W	C 402	ECKF1H122KB	C 1200PF, K, 50V
R 3106	ERDS1TJ221	C 220OHM, J, 1/2W	C 404	ECEA1CS221	E 220UF, 16V
R 3109	ERC12ZGK335	S 3.3MOHM, K, 1/2W	C 405	ECQM1H273KZ	P 0.027UF, K, 50V
R 3302	ERD25TLJ103	C 10KOHM, J, 1/4W	C 406	ECSF16E3R3Y	T 3.3UF, 16V
R 3303	ERD25TLJ331	C 330OHM, J, 1/4W	C 407	ECSF16E3R3Y	T 3.3UF, 16V
R 3304	ERD25TLJ682	C 6.8KOHM, J, 1/4W	C 408	ECKF1H103ZF	C 0.01UF, Z, 50V
R 3305	ERD25TLJ471	C 470OHM, J, 1/4W	C 410	ECQM1H223KZ	P 0.022UF, K, 50V
R 3306	ERD25TLJ471	C 470OHM, J, 1/4W	C 411	ECKD2H391KB2	C 390PF, K, 500V
R 3307	ERD25TLJ561	C 560OHM, J, 1/4W	C 412	ECEA1VS101	E 100UF, 35V
R 3308	ERD25TLJ331	C 330OHM, J, 1/4W	C 413	ECEA1VS221	E 220UF, 35V
R 3309	ERD25TLJ331	C 330OHM, J, 1/4W	C 414	ECQM1H223KZ	P 0.022UF, K, 50V
R 3310	ERD25TLJ151	C 150OHM, J, 1/4W	C 415	ECEA1CS222	E 220UF, 16V
R 3311	ERD25TLJ332	C 3.3KOHM, J, 1/4W	C 416	ECEA50Z1R5K	E 1.5UF, 50V
R 3312	ERD25TLJ331	C 330OHM, J, 1/4W	C 417	ECEA25Z22K	E 22UF, 25V
R 3313	ERD25TLJ224	C 220KOHM, J, 1/4W	C 420	ECKF1H103ZF	C 0.01UF, Z, 50V
R 3314	ERD25TLJ182	C 1.8KOHM, J, 1/4W	C 501	ECQM1H822KZ	P 8200PF, K, 50V
R 3315	ERD25TLJ391	C 390OHM, J, 1/4W	C 502	ECQM1H393KZ	P 0.039UF, K, 50V
R 3316	ERD25TLJ102	C 1KOHM, J, 1/4W	C 503	ECQM1H273KZ	P 0.027UF, K, 50V
R 3317	ERD25TLJ271	C 270OHM, J, 1/4W	C 504	ECEA1HS2R2	E 2.2UF, 50V
R 3318	ERD25TLJ561	C 560OHM, J, 1/4W	C 505	ECQF6332JZ	P 3300PF, J, 630V
R 3320	ERD25TLJ471	C 470OHM, J, 1/4W	C 506	ECQM1H392KZ	P 3900PF, K, 50V
R 3321	ERD25TLJ221	C 220OHM, J, 1/4W	C 507	ECEA16Z100	E 100UF, 16V
R 3329	ERD25FJ330	C 330HM, J, 1/4W	C 509	ECCF1H151J	C 150PF, J, 50V
R 3330	ERD25TLJ221	C 220OHM, J, 1/4W	C 510	ECEA1VS100	E 10UF, 35V
R 3331	ERD25TLJ221	C 220OHM, J, 1/4W	C 511	ECCD2H100F	C 10PF, F, 500V
R 3332	ERD25TLJ101	C 100OHM, J, 1/4W	C 512	ECKD2H561KB2	C 560PF, K, 500V
R 3333	ERD25TLJ101	C 100OHM, J, 1/4W	C 513	ECKD2H182KB2	C 1800PF, K, 500V
R 3334	ERD25TLJ392	C 3.9KOHM, J, 1/4W	C 514	ECQM1H333JZ	P 0.033UF, J, 50V
	CAPACITORS		C 515	ECKD2H182KB2	C 1800PF, K, 500V
C 301	ECEA1CN100S	E 10UF, 16V	C 520	ECEA1HS4R7	E 4.7UF, 50V
C 302	ECEA50Z1	E 1UF, 50V	C 521	ECKD2H103PE	C 0.01UF, P, 500V
C 303	ECEA16Z10	E 10UF, 16V	C 552	ECQF2H474JZA	P 0.47UF, J, 500V
C 304	ECCF1H101J	C 100PF, J, 50V	C 553	ECKD3D272KBN	C 2700PF, K, 2KV
C 305	ECEA1HS4R7	E 4.7UF, 50V	C 554	ECQM1H683KZ	P 0.068UF, K, 50V
C 307	ECEA1HS3R3	E 3.3UF, 50V	C 555	ECEA2ES220	E 22UF, 250V
C 309	ECEA1HS2R2	E 2.2UF, 50V	C 556	ECEA160N2R2	E 2.2UF, 160V
C 315	ECCF1H680J	C 68PF, J, 50V	C 557	ECKD2H561KB2	C 560PF, K, 500V
C 351	ECKD3D222JB8	C 2200PF, J, 2KV	C 558	ECEA1CS471	E 470UF, 16V
C 352	ECKF1H391KB	C 390PF, K, 50V	C 559	ECEA1VS221	E 220UF, 35V
C 353	ECKF1H821KB	C 820PF, K, 50V	C 568	ECEA1VS221	E 220UF, 35V
C 354	ECKF1H271KB	C 270PF, K, 50V	C 570	ECKD3D681JBN	C 6800PF, J, 2KV
C 356	ECEA1HS100	E 10UF, 50V	C 571	ECKD3D102KBN	C 1000PF, K, 2KV
			C 572	ECKD3D102KBN	C 1000PF, K, 2KV

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
C 573	ECKD3D102KBN	C 0.01UF, K, 2KV	C 1723	ECEA1HS010	E 1UF, 50V
C 601	ECCF1H121JP	C 120PF, J, 50V	C 1724	ECQM1H102KZ	P 1000PF, K, 50V
C 602	ECCF1H390JC	C 39PF, J, 50V	C 1725	ECQM1H103KZ	P 0.01UF, K, 50V
C 603	ECCF1H390JC	C 39PF, J, 50V	C 1726	ECEA1HN010S	E 1UF, 50V
C 604	ECKF1H103ZF	C 0.01UF, Z, 50V	C 1727	ECQM1H104KZ	P 0.1UF, K, 50V
C 605	ECQM1H273KZ	P 0.027UF, K, 50V	C 1728	ECQM1H103KZ	P 0.01UF, K, 50V
C 606	ECKF1H272KB	C 2700PF, K, 50V	C 1730	ECEA1CS470	E 47UF, 16V
C 607	ECKF1H101KB	C 100PF, K, 50V	C 1731	ECKF1H331KB	C 330PF, K, 50V
C 608	ECKF1H101KB	C 100PF, K, 50V	C 1732	ECKF1H222KB	C 2200PF, K, 50V
C 609	ECKF1H101KB	C 100PF, K, 50V	C 1733	ECQM1H122KZ	P 1200PF, K, 50V
C 610	ECCF1H050CC	C 5PF, C, 50V	C 1734	ECQM1H182KZ	P 1800PF, K, 50V
C 612	ECQM1H273KZ	P 0.027UF, K, 50V	C 1735	ECKF1H103ZF	C 0.01UF, Z, 50V
C 613	ECEA1ES4R7	E 4.7UF, 25V	C 1736	ECEA1CS331	E 330UF, 16V
C 614	ECEA50ZR47	E 0.47UF, 50V	C 1737	ECQM1H104KZ	P 0.1UF, K, 50V
C 615	ECEA50ZR22	E 0.22UF, 50V	C 1738	ECKF1H103ZF	C 0.01UF, Z, 50V
C 617	ECEA16Z47	E 47UF, 16V	C 1739	ECEA1CS470	E 47UF, 16V
C 619	ECQM1H273KZ	P 0.027UF, K, 50V	C 1741	ECEA1HSR47	E 0.47UF, 50V
C 620	ECEA1CS220	E 22UF, 16V	C 1742	ECEA1CS470	E 47UF, 16V
C 623	ECKF1H101KB	C 100PF, K, 50V	C 1745	ECKF1H182KB	C 1800PF, K, 50V
C 759	ECEA25W4R7Q	E 4.7UF, 25V	C 1746	ECEA1HS010	E 1UF, 50V
C 760	ECQM1H103KZ	P 0.01UF, K, 400V	C 1747	ECKF1H103ZF	C 0.01UF, Z, 50V
C 801	ECKD2H472PU	C 4700PF, P, 500V	C 1748	ECEA1CS470	E 47UF, 16V
C 802	ECKD2H472PU	C 4700PF, P, 500V	C 1749	ECKF1H103ZF	C 0.01UF, Z, 50V
C 803	ECKD2H472PU	C 4700PF, P, 500V	C 1750	ECKF1H103ZF	C 0.01UF, Z, 50V
C 804	ECET2DR471SW	E 470UF, 200V	C 1751	ECKF1H102KB	C 1000PF, K, 50V
C 805	ECEA2CS330	E 33UF, 160V	C 1752	ECKF1H102KB	C 1000PF, K, 50V
C 806	ECEA160V33Z	E 33UF, 160V	C 1753	ECEA1HS010	E 1UF, 50V
C 807	ECQM1A473KE	P 0.047UF, K, 125V	C 1755	ECKF1H103ZF	C 0.01UF, Z, 50V
C 808	ECKD2H103PE	C 0.01UF, P, 500V	C 1760	ECEA1CS470	E 47UF, 16V
C 1601	ECEA1CS100	E 10UF, 16V	C 1770	ECKF1H471KB	C 470PF, K, 50V
C 1602	ECEA1CS100	E 10UF, 16V	C 1780	ECKF1H331KB	C 330PF, K, 50V
C 1603	ECEA1CS101	E 100UF, 16V	C 1801	ECEA1CS100	E 10UF, 16V
C 1701	ECEA1CS470	E 47UF, 16V	C 1802	ECEA1CS100	E 10UF, 16V
C 1702	ECKF1H121KB	C 120PF, K, 50V	C 1803	ECEA1CS100	E 10UF, 16V
C 1703	ECQM1H473KZ	P 0.047UF, K, 50V	C 1804	ECEA1ES4R7	E 4.7UF, 25V
C 1704	ECQM1H473KZ	P 0.047UF, K, 50V	C 1805	ECEA1AS471	E 470UF, 10V
C 1705	ECKF1H103ZF	C 0.01UF, Z, 50V	C 1806	ECEA1AS471	E 470UF, 10V
C 1706	ECCF1H820JC	C 82PF, J, 50V	C 1807	ECEA1CS100	E 10UF, 16V
C 1707	ECCF1H390JC	C 39PF, J, 50V	C 1821	ECKF1H472ZF	C 4700PF, Z, 50V
C 1708	ECCF1H150JC	C 15PF, J, 50V	C 1822	ECKF1H472ZF	C 4700PF, Z, 50V
C 1709	ECCF1H270JC	C 27PF, J, 50V	C 1823	ECKF1H472ZF	C 4700PF, Z, 50V
C 1710	ECCF1H080CC	C 8PF, C, 50V	C 1824	ECEA1VS471	E 470UF, 35V
C 1720	ECKF1H182KB	C 1800PF, K, 50V	C 1825	ECKF1H103ZF	C 0.01UF, Z, 50V
C 1722	ECQM1H273KZ	P 0.027UF, K, 50V	C 1826	ECKF1H103ZF	C 0.01UF, Z, 50V

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
C 1827	ECEA1CS331	E 330UF, 16V	L 305	TLT560K999G	PEAKING COIL 56U
C 1828	ECEA1CS101	E 100UF, 16V	L 351	TLT560K999G	PEAKING COIL 56U
C 1829	ECEA1CS221	E 220UF, 16V	L 501	TLP408	CHOKE COIL
C 1830	ECEA1HS010	E 1UF, 50V	L 551	TLH6621P	H.CHOKO COIL
C 1831	ECEA1CS330	E 33UF, 16V	L 554	TLH15805	H.CHOKO COIL
C 1851	ECEA1HS010	E 1UF, 50V	L 560	TSC9110010	BEAD CHOKE 400 0
C 1852	ECEA1HS010	E 1UF, 50V	L 561	TSC9110010	BEAD CHOKE 400 0
C 1853	ECEA1HS010	E 1UF, 50V	L 601	TLT150K999G	PEAKING COIL 15U
C 1854	ECEA1HNO10S	E 1UF, 50V	L 602	TLT180J999G	PEAKING COIL 18U
C 1856	ECEA1HS010	E 1UF, 50V	L 603	TLT542K999G	PEAKING COIL 5.4M
C 1857	ECEA1HS010	E 1UF, 50V	L 751	TLH13604P	CHOKE COIL
C 1858	ECEA1CS470	E 47UF, 16V	L 801	TLP6506P	LINE FILTER COIL
C 1861	ECEA1HNO10S	E 1UF, 50V	L 1701	EFDMN645B85F	DELAY LINE
C 1901	ECKF1H103ZF	C 0.01UF, Z, 50V	L 1702	TLK153152	IF TRANS
C 2301	ECEA1ES222	E 2200UF, 25V	L 1703	TLK63111-1	2ND.BPA TRANS
C 2303	ECEA1ES471	E 470UF, 25V	L 1704	TLT470K999G	PEAKING COIL 47U
C 2304	ECKF1H103ZF	C 0.01UF, Z, 50V		TRANSFORMERS	
C 2305	ECEA1ES330	E 33UF, 25V	T 501	TLH6437	H.DRIVE TRANS.
C 2306	ECEA1CS101	E 100UF, 16V	T 551	TLF14536B	FLYBACK TRANS.
C 2307	ECEA1HSR47	E 0.47UF, 50V	T 1601	ETA16Z5AY	EARPHONE TRANS. 0
C 2308	ECCF1H101JC	C 100PF, J, 50V	T 2401	TLP13241	POWER TRANS.
C 2309	ECQM1H154KV	P 0.15UF, K, 50V	T 3101	ETD19Z16AY	PICTURE TRANS. 0
C 2310	ECEA1HSR33	E 0.33UF, 50V		DIODES	
C 2311	ECQM1H104JV	P 0.1UF, J, 50V	D 301	MA150	DIODE
C 2313	ECQM1H154KV	P 0.15UF, K, 50V	D 302	MA150	DIODE
C 2314	ECKF1H221KB	C 220PF, K, 50V	D 303	MA150	DIODE
C 2315	ECKF1H392KB	C 3900PF, K, 50V	D 304	TVSQA112R	ZENER DIODE
C 3101	ECEA1CS330	E 33UF, 16V	D 305	TVSQA113R2	ZENER DIODE
C 3102	ECEA1CS102	E 1000UF, 16V	D 306	0A90G	DIODE
C 3103	ECEA1ES470	E 47UF, 25V	D 401	TVSEM1Z	DIODE
C 3104	ECEA1VS101	E 100UF, 35V	D 402	0A90G	DIODE
C 3107	ECKDDL102ZE	C 1000PF, Z, 10V	D 403	TVSQA112R1	ZENER DIODE
C 3108	ECKDDL471MB	C 470PF, M, 10V	D 501	MA1200	ZENER DIODE
C 3301	ECEA1CS100	E 10UF, 16V	D 502	MA161	DIODE
C 3302	ECEA1CS330	E 33UF, 16V	D 504	MA1620010	DIODE 100V 800P 0
C 3303	ECEA1CS330	E 33UF, 16V	D 505	MA1500010	DIODE 100V 800P 0
C 3304	ECEA1HNO10S	E 1UF, 50V	D 510	TVSQA207M3	ZENER DIODE 0.3 0
C 3305	ECCF1H221J	C 220PF, J, 50V	D 551	MA162	DIODE
C 3309	ECEA1CS471	E 470UF, 16V	D 552	TVSRH1M	DIODE
	COILS		D 553	TVSRF1	DIODE
L 301	TLK150833	DELAY LINE	D 556	MA161	DIODE
L 302	TLX330J176C	PEAKING COIL 33U	D 558	TVSC2715M	DIODE
L 303	TLT102K999G	PEAKING COIL 1M	D 601	MA150	DIODE

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Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
D 602	MA150	DIODE		I.C	
D 751	MA27W	DIODE			
D 753	TVSB2404C	DIODE	IC 301	AN5315	VIDEO CHROMA
D 801	EP15B0M080F	POSITION	IC 401	AN5436	H-OSC/DRIVE; V-OSC/DRIVE
D 803	TVSEM1Z	DIODE	IC 501	AN5520	V-OUT
D 804	TVSC0508	DIODE	IC 801	TVSSTR380	AVR-H 1.8 1.3 1.3 1.3
D 805	TVSC0508	DIODE	IC1701	TVSTC4584BP	V/H DELAY
D 806	TVSC0508	DIODE	IC1702	TVSTC4093BP	V/H DELAY
D 807	TVSC0508	DIODE	IC1801	TVSTC4066BP	VIDEO SWITCH
D 813	TVSEM1Z	DIODE	IC1802	TVSTC4066BP	SOUND SWITCH
			IC3201	AN5260	SOUND OUT
D 1601	OA90G	DIODE		TRANSISTORS	
D 1702	MA150	DIODE	Q 301	2SA720-Q	VIDEO AMP.
D 1703	MA27T-A	DIODE	Q 351	2SC3063	R-DRIVE
D 1704	MA150	DIODE	Q 352	2SC3063	B-DRIVE
D 1705	MA150	DIODE	Q 353	2SC3063	G-DRIVE
			Q 501	2SC2653H	H-DRIVE
D 1706	MA150	DIODE			
D 1707	MA150	DIODE	Q 502	2SC1684-Q	H-OSC. DISABLE OUT
D 1708	MA150	DIODE	Q 503	2SA564-Q	H-OSC. DISABLE AMP
D 1710	MA150	DIODE	Q 504	2SA879	OVERLOAD PROTECTOR
D 1712	TVSRD12FB3	ZENER DIODE	Q 551	2SD953	H-OUT 1.0 1.3 1.3 1.3
			Q 601	2SA564-Q	RASTER SWITCH
D 1713	OA91	DIODE			
D 1720	MA150	DIODE	Q 602	2SA564-Q	RASTER SWITCH
D 1721	MA150	DIODE	Q 752	2SD401	UNDER SCAN SWITCH
D 1722	MA150	DIODE	Q 753	2SA564-Q	UNDER SCAN SWITCH
D 1723	MA150	DIODE	Q 1601	2SC1684-R	V/H SYNC BUFFER
			Q 1602	2SC1684-R	V/H SYNC OUT
D 1726	MA150	DIODE	Q 1701	2SC1684-R	VIDEO BUFFER
D 1727	MA150	DIODE	Q 1702	2SC1684-R	VIDEO/CHROMA, SEP.
D 1730	MA150	DIODE	Q 1704	2SC1684-R	VIDEO BUFFER
D 1731	MA150	DIODE	Q 1705	2SC1684-R	VIDEO/CHROMA, SEP.
			Q 1706	2SC1684-R	VIDEO BUFFER
D 1801	MA150	DIODE			
D 1802	MA150	DIODE	Q 1707	2SC1684-R	SYNC SEP.
D 1803	MA150	DIODE	Q 1708	2SA564-Q	SYNC BUFFER
D 1805	OA90G	DIODE	Q 1709	2SC1684-R	SYNC BUFFER
D 1806	TVSRD12EB2	ZENER DIODE	Q 1710	2SC1684-R	SYNC BUFFER
			Q 1711	2SC1684-R	SYNC SEP.
D 1807	TVSRM10B	DIODE	Q 1712	2SC1684-R	B/W SWITCH
D 1808	TVSRM10B	DIODE	Q 1713	2SA564-Q	B/W SWITCH
D 1809	TVSRM10B	DIODE	Q 1714	2SC1684-R	B/W DEFEAT
D 1810	TVSRM10B	DIODE	Q 1715	2SC1684-R	H. SYNC. OUT
D 1901	LN21RCPLH	DIODE (LED)	Q 1718	2SA564-Q	VIDEO BUFFER
			Q 1719	2SC1684-R	VIDEO BUFFER
D 3101	MA150	DIODE			
D 3301	OA90G	DIODE	Q 1720	2SC1684-R	V/H SYNC BUFFER
D 3302	MA27T-B	DIODE			

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
Q 1721	2SC1684-R	V. SYNC OUT	TJS168061	6P SHORT PLUG	
Q 1722	2SC1684-R	IMP. MATCHING	TJS168440	3P SHORT PLUG	
Q 1723	2SC1684-R	IMP. MATCHING	TJS29530	INTERLOCK PLUG	
Q 1801	2SC1684-R	VIDEO BUFFER	TJS35030	CRT SOCKET	
Q 1802	2SC1684-R	VIDEO BUFFER	TJS37300	EXT. SP JACK	
Q 1803	2SC1684-R	VIDEO BUFFER	TJS38950	RCA TYPE CONNECTOR	
Q 1804	2SA564-Q	VIDEO BUFFER	TKC131114	BODY	
Q 1805	2SC1684-R	VIDEO AMP.	TKC131312	BOTTOM COVER	
Q 1806	2SC1684-R	VIDEO AMP.	TKE130300-1	ESCUTCHEON	
Q 1807	2SC1317-R	VIDEO BUFFER	TKK69221-6	HANDLE	
Q 1808	2SC1317-R	VIDEO BUFFER	TKP1310311-1	BOTTOM DOOR (R)	
Q 1809	2SC1684-R	SIGNAL DEFEAT	TKP1310321-1	BOTTOM DOOR (L)	
Q 1820	2SC1383-Q	+12V REG.	TKP1310341	ESC PANEL (R)	
Q 1851	2SC1684-R	SOUND BUFFER	TKP1310351	ESC PANEL (L)	
Q 1852	2SC1684-R	SOUND BUFFER	TKR13970	MOUNT PIECE	
Q 1853	2SC1684-R	SOUND BUFFER	TKR13980	MOUNT PIECE	
Q 1854	2SC1684-R	SOUND BUFFER	TKU130900	REAR COVER	
Q 1855	2SC1684-R	SOUND AMP.	TLC2024-2S	CONVERGENCE YOKE	
Q 1856	2SC1684-R	SOUND BUFFER	TLK159093	DEGAUSSING COIL	
Q 3101	2SC1317-R	VIDEO DRIVE	TLK159093	DEGAUSSING COIL	
Q 3301	2SC1684-R	VIDEO AMP.	TLY15362F	DEFLECTION YOKE	
Q 3302	2SC1684-R	VIDEO AMP.	TML61287	FOCUS PIN CAP	
Q 3303	2SC1684-R	VIDEO AMP.	TMM15202	CRT SOCKET COVER	
Q 3304	2SA564-Q	VIDEO AMP.	TMM15525	RUBBER CUSHION	
Q 3305	2SC1684-R	VIDEO BUFFER	TMM17514	DY WEDGE	
Q 3306	2SA564-R	DC CLAMP	TMZ149802-1	CHASSIS GUIDE (L)	
			TMZ149803-1	CHASSIS GUIDE (R)	
	OTHERS		TNP10902AB	CIRCUIT BOARD CRT	
	EAS8P47SC	SPEAKER	TNP46108ZA	CIRCUIT BOARD F	
	TBL131303	SET LEG	TNP46109	CIRCUIT BOARD Z	
	TBM24661	MODEL NAME PLATE	TNP46110ZA	CIRCUIT BOARD W	
	TBX1351300	INPUT SELECTOR KNOB	TNP46111	CIRCUIT BOARD G	
	TBX1768900	SOUND KNOB	TNP46144	CIRCUIT BOARD C	
	TBX2782900	POWER KNOB	TNP62230ZB	CIRCUIT BOARD J	
	TBX2783100	SELECT BUTTON (B)	TNP62231ZB	CIRCUIT BOARD E	
	TEK17902	DOOR LOCK SWITCH	TNP65826ZA	CIRCUIT BOARD MAIN	
	TES4211	COIL SPRING	TPC149741	OUTER CARTON	
	TES6183	SPRING	TPD131037	CUSHION (UPPER)	
			TPD192214	CUSHION (BOTTOM)	
	THE689Z	SCREW	TPE174024	SET COVER	
	TJS148480	8P VIDEO SOCKET			
	TJS148500	BNC CONNECTOR	TQB611750	FAN BAG	
	TJS168041	4P SHORT PLUG	TSE365	75Ω/HIGH SELECT SWITCH	
	TJS168051	5P SHORT PLUG	TSX1167	POWER SUPPLY CORD	
			TXFMK01H55	MAGNET	

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
	XCJ6P21E	HEADPHONES JACK			
	XWG6J20	WASHER			
	510ZTB2241	PICTURE TUBE			
A C	TZS9001	4P COUPLER KIT			
F 1	TXAJTF1MFZ	CONNECTOR, F1			
F 2	TXAJTF2MFZ	CONNECTOR, F2			
F 3	TXAJTF3MFZ	CONNECTOR, F3			
V 1	TXAJTV1MFZ	CONNECTOR, V1			
V 2	TXAJTV2MFZ	CONNECTOR, V2			
V 3	TXAJTV3MFZ	CONNECTOR, V3			
V 9	TXAJTV9MFZ	CONNECTOR, V9			
V 11	TXAJTV11MFZ	CONNECTOR, V11			
V 13	TXAJTV13MFZ	CONNECTOR, V13			
V 19	TXAJTV19MFZ	CONNECTOR, V19			
W 1	TXAJTW1MFZ	CONNECTOR, W1			
W 2	TXAJTW2MFZ	CONNECTOR, W2			
W 15	TXAJTW15MFZ	CONNECTOR, W15			
F 1	XBA1F40NU100	FUSE 125V 4A			
F 2	XBA1C15NU100	FUSE 125V 1.5A			
	TJC6319	FUSE HOLDER			
	TJC6320	FUSE HOLDER			
S 301	EVQR4AL13	SVC/VTR SWITCH			
S 302	EVQR4AL13	RASTER SWITCH			
S 801	ESB99350T	POWER SWITCH			
S 1702		UNDERSCAN SWITCH			
S 1703	ESB621008	H-DELAY SWITCH			
S 1704		V-DELAY SWITCH			
S 1705		BLUE ONLY SWITCH			
S 1706	ESB621007	COMB/TRAP SWITCH			
S 1707		CHROMA SWITCH			
S 1708		SYNC SWITCH			
S 1901	ESRM143F25L	INPUT SELECTOR SWITCH			
V 7	TZS9009	3P CONNECTOR KIT			
X 601	TSS816M	CRYSTAL OSCILATOR			